THE

Addresses and Journal of Proceedings

OF THE

NATIONAL EDUCATIONAL ASSOCIATION.

SESSION OF THE YEAR 1876,

IN

BALTIMORE, MARYLAND.

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NOTICE.

The Committee on Publication take pleasure in sending out this Centenary Volume of the Proceedings of the National Educational Association, held in Baltimore July 10th, 11th, and 12th, 1876. The volume, notwithstanding the fact that four or five papers and some reports were not furnished for publication, is larger than any of those previously published. The ability and variety of the papers and addresses were a marked feature of the proceedings. The presence of distinguished foreign gentlemen added to the interest of the Centenary meeting. The address in Japanese by the Hon. Fujimaro Tanaka, was furnished in Japanese characters to the Secretary, and he had determined to have it photo-lithographed for publication in this volume, but the fear that it might be published upside down deterred him.

The unexpected size of the volume has delayed the time of publication somewhat; the sheets however were sent to the bindery before the middle of December, being more than two months earlier than they were sent last year. If those who shall read papers, addresses, and reports at the next meeting will have the matter ready to deliver to the Secretary at the meeting, the next volume could easily be ready for delivery by the the first of December, 1877.

Although no proofs have been sent to authors for want of time, it is believed that this volume, notwithstanding much bad copy, is as free from mistakes as any of the preceding ones. Some of the copy, it is but just to say, was excellent, several papers being sent in print.

The Secretary has advanced all the funds necessary to pay for the publication of this volume, and hence it is hoped that those who enrolled themselves as life-members, who have not yet remitted to the Treasurer or Secretary will soon do so, that the indebtedness of the Association may be cancelled at the earliest possible date.

The price of this volume by mail postpaid has been fixed at $2.00, or in quantities of ten or more, expressage or freight to be paid by the purchaser, at $1.25 each. This volume is cheap at two dollars; it contains fully twice as much matter as an ordinary coarse-print two-dollar book.

Only 1000 copies having been printed, early application should be made to the Secretary, W. D. Henkle, Salem, Ohio, or to the Treasurer, J. Ormond Wilson, Washington, D. C., by those who wish to procure volumes.

December 8, 1876.

W. D. Henkle,
E. T. Tappan,
S. R. Thompson,
D. B. Hagar,
Jas. Cruikshank,
H. A. M. Henderson,
Committee on Publication.

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GENERAL ASSOCIATION.

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MORNING SESSION.

THE Sixteenth Annual Meeting of the National Educational Association met in the Academy of Music, in Baltimore, Md., at 10 o'clock, A. M., Monday, July 10th, 1876. After the calling of the Association to order by the President, W. F. PHELPS, the Rev. Dr. J. AVERY SHEPHERD opened the exercises with prayer.

The President then introduced His Excellency JOHN LEE CARROLL, Governor of Maryland, who welcomed the Association in the following words:

We have been favored in this country during the past few months with a great number and a great variety of conventions. Of these our city of Baltimore has had her full share, and although some of our meetings have not been as exciting as those to which we might refer, on other questions, yet doubtless they have been replete with interest, and have accomplished fully the purposes for which they have been convened.

We are called upon to-day to welcome to our midst those who have gathered here from every quarter of our country, as the voluntary contributors to the greatest source of strength that we possess as a nation. Without offices to bestow upon expectant candidates, without the intense excitement that stirs to its depths the gathering of political bodies, we have the calm and quiet advocates of education, assembled to renew their allegiance to the cause, and particularly to propose the changes and improvements which experience has shown are required. Here, indeed, is a spectacle that may well call forth the admiration of an intelligent people, and honored is the State or city that is made the theatre of their useful deliberations.

We have a national, a patriotic feeling of pride in our great system of free education, and long ago the sentiments had become deeply impressed on the public mind that one of the first duties of the government is to provide for the instruction of its youth. Hence, in the strong remarks of one of our leading statesmen, "for the purposes of instruction, every man is subject to taxation in proportion to his property, and we look not to the question whether he have or have not children to be benefited by the education for which he pays. We regard it as a wise and liberal system of police by which life and property and peace and safety are secured. We

hope for a security above and beyond the law—in the prevalence of an enlightened moral sentiment, and knowing that our government rests directly on the public will, in order that we may preserve it we endeavor to direct into safe and proper channels."

These are noble words and purposes, well calculated to encourage all who are interested in the cause. Nor at the same time can we deny that our free-school system has become an engine of mighty power, that may be used for evil as well as good. How important, then, becomes these annual conferences of gentlemen who are interested in the great cause of education. How important that acting under the instructions of those who interest themselves for the public good, we should, in the eloquent language of Webster, "sometimes stop and take an observation, to see how far the elements may have driven us from our true and proper course."

This I take to be the right purpose of this assemblage here to-day, and feeling that the appreciation of the people of Maryland of the great blessings of free education can be second to none in our broad land, I have the honor, gentlemen, in their name, to welcome you to your labors, with the assurance and belief that they can only be directed for the benefit and prosperity of all.

F. C. LATROBE, Mayor of Baltimore, then welcomed the Association. He spoke as follows:

Gentlemen of the National Educational Association.—The Governor of Maryland has welcomed you to our State, I now bid you welcome to its chief city. We are glad that you have selected Baltimore as your place of assembling for the centennial year. The great cause of education, in the furtherance of which your society is so earnestly engaged, is regarded by our people with an especial interest, manifested by a system of public schools, which we believe compares favorably with that of any of our sister cities. In 1875 our schools numbered 125, with an attendance of 46,000 pupils, and were supported by an expenditure of $717,000. I make this statement to show that the people of Baltimore are alive to the necessity of a general diffusion of knowledge among our citizens.

The great liberality of a fellow-townsman has enabled us to establish the Johns-Hopkins University, which we hope is destined to be not only the pride of our State and city, but valued and appreciated throughout the whole country. I am sure that much good to the cause of education must result from your deliberations. Coming, as you do, from all sections of the Union, your experience and knowledge of the subject necessarily gives to your discussions a value from which those having control of this most important national institution cannot fail to derive great benefit. We in this city will watch your proceedings with no small degree of interest, and as you have honored us in the selection of your place of meeting, we would be false to our reputation for hospitality did we fail to extend to you a right hearty Maryland welcome to the city of Baltimore.

The President then responded to these words of welcome as follows:

Governor Carroll and Mr. Mayor:—When nearly one year ago the American Educational Association assembling and deliberating in the salubrious atmosphere of the Northwest, received a telegram from Baltimore inviting the Association to assemble in this place in this centennial year,

we were perfectly well aware that we should receive a warm reception. Not that we expected the visitation that the clerk of the weather seems to have bestowed upon us; but we were aware of the notable and generous provisions made by the City of Baltimore and the State of Maryland for the education of her people. The reputation of its splendid system of public schools, culminating in the Baltimore City College; the magnificent endowment of the Johns-Hopkins University, by the munificence of one of your citizens: the grand provision made here for your reformatory and correctional institutions, extending their blessings to every class and every form of human want and human suffering, had given to your city a reputation which is as extended as our country itself. It was on this account more than upon any other that we were induced to select this city as the location of the present meeting.

Allow me, therefore, in the name and in behalf of this Association to tender to you its grateful acknowledgements for your warm words of welcome, and for the generous reception which you have accorded to us. I will only say in this connection—for the temperature admonishes us that we should be brief—that it will be our earnest endeavor to show ourselves to have been worthy of the kind and generous words with which you have addressed us.

After this response he proceeded to deliver the following

INAUGURAL ADDRESS.

Ladies and Gentlemen of the National Educational Association:

Allow me to congratulate you upon the auspicious circumstances under which you meet to celebrate another anniversary of this cherished organization.

Nineteen years ago, a few earnest spirits assembled in that city of brotherly love where the Declaration of Independence was proclaimed, and a new nation was born, to inaugurate this movement designed to aid in giving full effect to the ideas upon which that nation was founded.

Some of these worthy spirits are with us to rejoice to-day. Others, through the chances and changes of time, have been borne to distant places and into different pursuits. Others, still, as we may reverently trust, are looking down approvingly upon us from the serene heights of that Better Country which is the exceeding great reward of life's toilsome march bravely and worthily endured.

It is meet that we should mingle our congratulations on this occasion, that the seed thus sown in weakness has been raised in power; that the acorn thus planted by loving hands, in 1857, has continued to expand until, in this Centennial of the Republic, it has become a vigorous oak in the grateful shade of whose wide-spreading branches are gathered the representatives of our whole country and of many lands beyond the sea.

It is a noteworthy coincidence, too, that while we are here to discuss the true *principles* of national greatness, welfare, and happiness, in that city where the inalienable rights of man received their noblest and best expression, there is an august assemblage of the people of every clime, to study in one vast object lesson the palpable demonstration of the truth that

knowledge is power; that liberty is the birthright of man; that virtue and intelligence universally diffused are not only a nation's greatest wealth and surest defense, but the world's most imperative need.

In that grand concourse we behold the representatives of our good old mother-country, merry England, upon whose dominions it is said the sun never sets. She is there to bear witness to the marvellous progress of her children through that brief cycle in a nation's history, a hundred years of peaceful development. And "sunny France," chastened by the humiliation of recent defeat, yet emerging, as we may fervently hope, from the darkness of despotism into the clear light of liberty, equality, and fraternity; United Germany, whose "thinking bayonets," in 1870, reversed the disasters of 1806; imperial Russia, stretching across two continents, with longing eyes turned toward the Bosphorus and the plains beyond; Turkey, "the Sick Man;" classic Greece, nursery of sages and heroes; Italy, Queen of the Mediterranean; Austria, Spain, and the Norseland—all are there to participate in the great pageant in honor of the victory that free thought and free labor have won.

Nor are these all. In that eager throng we may see the representatives from India's coral strand; from China, the Flowery Kingdom, the land of Confucius, shut up for a thousand years within the impenetrable walls of her own exclusiveness, yet in these latter days opening her gates to the march of progress; from Japan, that marvellous example of a nation born to new life in a day—Japan, aglow with the throbbing pulsations of modern civilization; stirred to the very depths of its social and political being by American ideas, American institutions, and American industries, inspired and directed by American educators and American artisans.

And so, too, from Afric's sunny fountains; from the banks of the famous yet mysterious river; from the shores of the historic sea whose waters were parted that the elect of God might escape from the marshalled hosts of the vindictive pursuer; from Egypt, "ancient of days," whose traditions are lost in the mists of five thousand years; whose pyramids, temples, and obelisks are the mausoleums of buried labor, have come a new race of wise men to witness the miracles that have been wrought by free toil upon the free soil of this land of the Occident.

And last, but not least, we cannot omit, on this occasion, an honorable mention of that vast continent, linked alike in physical structure and political destiny with our own; that land where a Bolivar once struggled and triumphed in the cause of liberty; where a Sarmiento, prince among statesmen and patriots, still lives and labors, and where a Dom Pedro rules, earnestly seeking to enlighten and to bless. That land so long torn by internal dissensions, catching the spirit of the age, has vigorously begun the work of national regeneration, by sending the schoolmaster instead of the soldier abroad. The Argentine Republic, under the eminently wise and statesmanlike leadership of Sarmiento and his compatriots, recognizing that the common school is the *corner-stone* of a free government, is laying broad and deep the foundations of future prosperity. Normal schools are there being established in every province, under the direction of American teachers whose acceptable services command a most generous reward. And the Emperor of Brazil, like another famous monarch of the East, lays aside

the cares of state for a season, pays his respects to the Great Republic, declines all ostentatious displays and tedious formalities, and in the simple character of a private citizen, travels to our remotest borders, examines our vast resources, visits our free schools, observes the evidences of a century's progress, and studies the causes of our unparalleled prosperity.

But we have other sources of encouragement and rejoicing no less inspiring than these. We have just passed the threshold of the second century in our national existence. We have commemorated its birth with unusual demonstrations of patriotic devotion. The acclamations of forty millions of people over the glad event have scarcely yet died away. The past, with its hopes and fears, its trials and struggles, its victories and defeats, its lessons and warnings, is left behind and is secure. The future with its incentives and discouragements, its responsibilities and duties, lies all before us and is ours to improve. It is fitting, therefore, that we should look at what we have been and are, to the end that we may more clearly discern what we ought to *be* and to *do*. And since we can read the future only in the light of the past, let us briefly contrast our circumstances in 1776 with those of 1876.

Then we were a community of thirteen feeble colonies, struggling single-handed and alone, amid the throes of a revolution whose issue no man could clearly foresee. Now we are a nation of thirty-seven States and eleven Territories, great in all the elements of material strength and at peace with all mankind. Then we posessed an available area of but little more than 300,000 square miles. Now we control more than 3,500,000 square miles. Then our population was less than 3,000,000. Now it is more than 40,000,000. Then our coast-line, restricted to the Atlantic slope, was scarcely more than 2,000 miles in extent. Now we sweep along the margins of three great oceans, a gulf and the chain of lakes, giving us a coast-line, including Alaska, of not less than 8,000 miles. Then the Potomac, Delaware, Hudson, and Connecticut, with an aggregate length of fifteen hundred miles, were the principal arteries of commerce within our borders. Now the Mississippi with its tributaries, the Missouri, the Ohio, Arkansas, and others in the central region, and the Columbia on the western slope, give us, of navigable streams, a length of not less than 15,000 miles, with numerous other respectable streams left out of the calculation! Then the Alleghanies, with their hidden stores of iron and coal, the bone and sinew of modern industry, were our principal vertical reliefs. Now the vast Rocky-Mountain system, with its sierras and coast ranges, yielding its rich bonanzas of silver and gold, and surcharged with every element of mineral wealth known to science or useful to man, stands ever inviting the magic touch of educated labor to pour into the national coffers treasures far beyond the wealth of Ormus or of Ind. Then a narrow belt from eighty to three hundred miles in width, from the Appalachians to the sea, and from the old Granite State to Georgia, inclusive, comprised the sum total of our national farm. Now the broad savannas and limitless prairies of the Mississippi Valley, from 800 to 1,700 miles in breadth, and stretching from the "Unsalted Sea" to the Mexican Gulf, together with the alluvial bottoms of the great Pacific slope, really inconceivable in extent, are a part and parcel of our agricultural domain. Then the rudest implements of husbandry, mainly of wood, sufficed for

the small tracts that were brought under imperfect cultivation. Now it is no uncommon occurrence for labor-saving machinery, almost abolishing human muscle and the hot sweat of toil, to transform an entire township into "a little farm well tilled." Then a good strong man could carry all the implements needed on the farm, save the clumsy harrow and cart, upon his own broad shoulders. Now a railroad car can scarcely transport the outfit necessary for a single prosperous granger! Then for the toiling seamstress, it was nothing but

"Stitch! stitch! stitch!
"In poverty, hunger, and dirt."

Now the merry music of the sewing-machine has superseded the dolorous "Song of the Shirt." Then wind, water, and muscle were the reigning powers of propulsion and locomotion. Now the Genii of electricity and steam have nearly annihilated time, space, and resistance, made willing servants of the great powers of nature, and brought the ends of the earth into intimate communion. Then it was the rickety stage-coach over rustic bridges and corduroy roads at three miles an hour. Now it is the locomotive and the palace car, crashing over rivers and mountains, from ocean to ocean, in *eighty-three* hours. Then, in urgent cases, it was the courier and the express rider, with their relays of steeds, from Baltimore to Philadelphia in the space of a day. Now it is the telegram and cablegram around the world in the twinkling of an eye. Then the whitened sail must be spread to the gale for two or three months to compass the distance between the old world and the new. Now the stately steamship, like a Titan in armor, breasts the waves of the same restless sea in eight days. Then, as for ages before, a gentle mist arose with the sun of morning, and apparently floated away into the distant ether. Now its twin-sister, steam, is harnessed to the half-reasoning engine and tunnels the mountain, belts the broad prairie, spans the raging flood, whirls millions of spindles, shoots countless shuttles, revolves the light-giving printing-press, becomes mightiest of kings and most obedient of subjects. Then, through the researches of Priestly and Lavoisier, the knowledge of oxygen had just dawned upon the world. Now this capital discovery has dissipated absurd theories, resolved many mysteries, revolutionized manifold industries, and added immeasurably to the means of human happiness. Then the brilliant hues of the solar spectrum, as reflected in the bow of promise, set in the clouds, merely challenged the admiration of the curious or the reverence of the religious. Now the spectroscope has distanced the telescope, defied the laws of gravitation, palsied the arms of the chemical balance, invaded the realms of the king of day, *cleared up* the sun spots, determined the constitution of the planets and of star-dust, and given us something more than glimpses of "other worlds than ours."

But time would fail in the attempt even to outline the marvellous changes and beneficent advances coincident with the life of the republic. Nor can it be claimed that this wonderful progress is due to our own superior knowledge or prowess in mastering the circumstances of our extraordinary situation. It should seem to us, rather, that into our history have been crowded the rich fruitage of the thought and labor, the enduring and suffering of

all antecedent time. The toilers at the tower of Babel, the inventors of the lost arts, the designers and builders of the pyramids, the star-gazers on the plains of Chaldea, the alchemists searching for the elixir of life, and, above all, the Man of Sorrows bearing the burdens of a whole race, have thus helped to make us what we are, to exalt us to Heaven in our privileges and blessings.

The facts presented by these contrasts, however, owe their chief significance to their important bearing upon the questions we have met here to consider. They are factors of immense importance in the problem of universal education. They furnish both the means and motives for the great work before us. The expansion of our national domain, the enormous increase of our population, the multiplication of States, the wonderful development of our industries consequent upon the progress of scientific discovery, the arts of invention and the wider diffusion of knowledge, open up to us as a nation, innumerable possibilities, present us with better opportunities, and impose upon us higher responsibilities and more imperative duties in the education of the masses, than ever before fell to the lot of any portion of the human race. As to some of these duties, it will soon be appropriate to refer. Let us first, however, briefly glance at our comparative educational, as we have done of our material condition, at the opening and close of that act in the drama of our national existence now under review.

Educational statistics seem to be a modern innovation. To secure those which are accurate and reliable is even now a difficult, if not an impossible task. The average school-district officer is a poor statistician. He is expert in proving that even *figures* can tell an untruth! In the general looseness that still pervades the administration of our State school systems it is hard to arrive at satisfactory results in this important direction.

During the earlier periods of our country's history, with no comprehensive system of school organization, statistics of this character were not possible. Hence, no very precise comparisons can now be made. We know that it was the custom of many of the wealthier class to send their sons to the mother-country for the training that was to fit them for the struggle of life.

Prior to 1776 but nine colleges had been established, and not more than five of these, we are told, were in a really efficient condition. Now, more than four hundred institutions bearing the titles of "college" and "university" are distributed throughout forty of the States and Territories, with nearly 57,000 students and 3,700 professors and teachers. Then little was done for the higher education of women. Now there are 209 female seminaries, with 23,445 students and 2,285 teachers. Then, says a writer in the *New-England Journal of Education* for June 10th of the present year, "professional schools were almost unknown. The candidate for the honors of the law, the dignities of the ministry, and, generally speaking, for the toils of medical practice, was obliged to pursue his studies under private tutors." Now there are 322 professional schools of the various classes, excluding teachers' seminaries, with 23,280 students and 2,490 instructors. Then Normal Schools had no existence on this continent. Now 124 are reported in the United States alone, with 24,405 students and 966 instructors. Then there were no commercial colleges. Now 127 are in operation, with 25,892

students and 577 teachers. Then secondary and preparatory schools had scarcely a name by which to live. Now 1,122 are said to exist, affording instruction to 100,593 pupils and giving employment to 6,163 teachers. The Kindergarten, that last and best of educational inventions, is a very recent importation. In 1874 we were blessed with fifty-five of these human nurseries, with 1,636 pupils and 125 teachers. May their numbers rapidly increase. We have no means of giving the school population of those earlier days. It is not likely that it was ever ascertained. Now thirty-seven States and eleven Territories report an aggregate of more than 13,000,000, or more than four times the total population of the country in 1776. Then the school enrolment was, of course, unknown. Now it amounts to the respectable figure of about 8,500,000. Then the schools were scattered and their number was correspondingly restricted. Now they are estimated at 150,000, employing 250,000 teachers. The total income of the public schools is given at $82,000,000, their expenditures at $75,000,000, and the value of their property at $165,000,000.

Such are some of the facts and figures, expressed in round numbers and without any responsibility for their strict accuracy, that indicate the educational progress of the nation during its first century. They are as reliable, undoubtedly, as our present means for obtaining statistical information on this subject will warrant. They serve to afford us a general view of the situation, and such a view is the one that is most pertinent to an occasion like the present. They enable us to make at least a rough comparison between our material and educational growth, and to decide whether the latter is worthy of the former, and whether, as a people, we have acted up to the standard of our responsibilities and duties.

At first sight such figures are imposing and gratify our pride. We like to boast of the magnificence of our provisions for public education. It is a favorite theme in anniversary orations. It is pleasant to reflect that we have 150,000 public schools with 8,000,000 pupils and 250,000 teachers. We seem to be educationally rich with school property, valued at nearly $166,000,000, and an annual income of $82,000,000. These, when taken in the aggregate, are vast sums, leading many an urban, as well as rural financier, to "count the cost" and to affirm that our expenditures for education are extravagant and out of proportion to its importance and results.

But in order properly to appreciate our real position educationally, it is necessary to bring other important facts into the foreground. The figures thus far exhibited seem to indicate what we have done. There are others that tell us with impressive emphasis what we have *not* done. With a school population, as reported, of 13,000,000 we have an actual enrolment of but 8,000,000. The discrepancy between these numbers, is, at best, fearful to contemplate. Making all proper allowance in this difference of 5,000,000 for those who have left the schools and whose meagre "education is completed," we have a ghastly procession of tens of thousands of untrained children and youths marching on each year to swell the ranks of the more than 2,000,000 adult illiterates that are at once the danger and disgrace of the Republic.

The number of illiterates by the census of 1870, above the age of ten years, was, in round numbers, 5,500,000. Of these, more than 2,000,000

were adults, upwards of 2,000,000 more were from fifteen to twenty-one years of age, and 1,000,000 were between ten and fifteen years. Of the number between fifteen and twenty-one years, it is estimated that about one half have passed the opportunity for education. And, since it is well understood that a large proportion of the children in this country leave the schools, perhaps at an average age of ten or twelve years, the conclusion is irresistible that tens of thousands of those who are reported as illiterates between ten and fifteen years of age will forever remain so. Of the 930,000 illiterates between fifteen and twenty-one years, who have passed their opportunities for instruction, 137,000 are in the Northern States, 15,000 in the Pacific, and 778,000 in the Southern. The United States Commissioner of Education, in his report for 1871, truthfully remarks that "the survivors of these 930,000 boys and girls will all, within the next five years, be reckoned among the adult illiterate host of the country." And it is sad to reflect that, in this year of our national jubilee, there they actually are, our humiliation and reproach, a living protest against our indifference and neglect.

Figures are proverbially dry, and I forbear to follow them further on this occasion than to say, that for reasons not now necessary to state, eminent authorities maintain that thirty per cent should be added to the reported statistics of illiteracy, in order to obtain the actual facts. On this hypothesis the number already quoted would be considerably increased. But enough has already been said, I trust, to challenge the renewed attention of the thoughtful and the patriotic to this *great question of the hour:* How shall we obliterate the illiteracy of our country?

To the foregoing considerations I cannot refrain from adding others of almost equal pertinency and importance. We must not make the fatal mistake of passing judgment upon the actual condition of education among our people, based upon the number enrolled, the number of schools or the amount expended upon them. The question of QUALITY here is paramount. Says an eminent English statesman and author, in an admirable work on Education Reform: "The *goodness* of Education is the first thing to be looked at. The diffusion of a bad system is the diffusion of an evil. Numbers here, so far from being matters of congratulation, are matters of regret. When we are told there are 60, or 600, or 6,000 schools, we are told nothing, sometimes worse than nothing. We do not ask for buildings merely, we ask for Education."

No thoughtful person, accustomed to penetrate through shadows to substances, through formalities to realities, can escape the conclusion that much of what passes for education in this country is not an unmixed good, but that much of our so-called teaching is an unmixed evil. Ignorance as well as learning has a wondrous power of reproduction. Ignorance has its grades and shades. A little learning is a dangerous thing. Given absolute illiteracy as the zero-point of ignorance, we might represent its upward grades by a few of the minor digits, with innumerable fractional intermediates which even the Calculus could never fitly indicate!

The ability to read and write is not education, nor necessarily, the beginning of it. The latter depends altogether upon the *method pursued* and the *quality* of the result. It depends upon the tendencies established, the dispositions fostered and the habits formed during the process of acquiring.

The first steps are the all-important steps. The earlier impressions are not only the most lasting, but the most potent in shaping the character and destiny of the child and the man. The spirit, the skill, and the *character* of the teacher are everything. The value of a school depends upon its *quality.* A thoroughly-good one is an unmixed blessing. A thoroughly-bad one is an unmixed curse; and we have both. Mis-education may be worse than no education. There is at least one sadder evil than ignorance, and that is *to know the right but the conscious wrong pursue.* It is educated vice and crime. It is the development of moral suicides and assassins. The teaching of the simplest elements may be attempted in so absurd and unskilful a manner, and amid such surroundings, as to blunt the natural perceptions, stifle the observing faculties, becloud the reason, impair the judgment, and generally to dwarf the intellect, distort the moral nature, and wreck the future character.

In looking at the magnificent figures of the school statistics already presented, therefore, and as our eyes rest upon the grand aggregates of 150,000 schools, with 8,000,000 pupils and 250,000 instructors, we should not disguise from ourselves the unwelcome truth that all is not gold that glitters, that many schools are not centres of moral and intellectual light, and that many teachers are blind leaders of the blind. We must bear in mind, too, that the average attendance falls far short of the total enrolments; that the figures of the latter are often delusive; that they include vast numbers who are in the schools but a few days, a few weeks, or a few months in the course of a year. I think it would not be far out of the way to assume that the average daily attendance in the schools of this country throughout a full school year of ten months, is but little more than half the total enrolment, or about 4,000,000. This would be especially true of the rural districts, in multitudes of which, schools are maintained but three or four months, and in which large numbers of our children and youth receive their only educational advantages. A school of three or four months, even under the most favorable circumstances as to quality, is but a feeble agency for the development of those moral and intellectual germs that enter into the social and political life of a self-governing people, and upon which the success and duration of that life so pre-eminently depend.

And, here, let me not be suspected of entertaining unnecessary alarm, nor of dwelling too long upon the dark side of the picture. Let us believe rather that these are the times and that this is the occasion demanding that we look all the facts of our situation squarely in the face. It is true we have existed a hundred years, and a century is but a span in the life of a nation. If there be any form of government destined in the order of Providence to an indefinite perpetuity, that government ought to be "of the people, by the people, and for the people," and it should present the sublime spectacle of a great nation existing but to educate itself, to free itself from every semblance of ignorance, bigotry, injustice, and wrong, and to clothe itself with righteousness and truth as with a garment.

In the patent facts of our illiteracy, at which I have merely given a passing glance, and in the imperfection of much of our elementary instruction, growing out of the youth, inexperience, and incompetency of thousands of our teachers, it is manifest that we must seek for the root of a multitude of

evils that afflict our social and political life. For, what is noble manhood but the fruitage of good seed sown and cultivated in childhood? And what are human wrecks but the fragments of weak vessels spoiled in the building? In the sublime methods of the Divine economy there are no accidents. All effects are the result of adequate causes. In the development of human character every man must be his own master-builder. The little child must be lovingly led, guided, and controlled, so that, in due time, he may order his own steps aright. We have the assurance of the wise man of old that: "Train up a child in the way he should go and when he is old he will not depart from it."

What, then, but an inadequate outfit for the voyage of life? what, but false lights, a false guidance and direction in the beginning? what, but superficial and slip-shod attainments? what, but a beclouded mental and moral vision? what, but a gross miscalculation of chances and conditions? what, but careless, wasteful, and irregular habits of thinking and doing? what, in brief, but a wrong education and no education at all, can account for so many failures in business? so many distressing and unnecessary accidents? so much poverty, misery, and crime? so much wanton desecration of private and public property? so much incompetency, dishonesty, and corruption in public affairs? so much calumny and injustice in partisan conflicts? so much unwise and unnecessary legislation? and so many grinding monopolies inimical to the rights and the interests of the people at large.

Said an eminent English statesman before quoted:

"Bad government cannot exist for any time in the face of good Education; neither can popular folly or disorder. Men who have knowledge and reflection will soon have a steady and well-regulated will, and will not lightly surrender themselves to the random guidance of others. They will weigh and taste for themselves, and will not require a weigh-master and taster to weigh and taste for them."

Again, he says:

"It is to this interior world, to the enduring soul of man that the legislator for millions and generations ought to look. If that be pure and sound, there is no fear of what may proceed from it."

He continues,

"Teach; teach and habituate the people to make a *right use* of the faculties which God has given them, and then trust them fearlessly to themselves. With such a guide within them, it little matters who may be over them, self-government, of all governments, then becomes the easiest and the best."

In these terse, yet profound and truthful maxims of a true statesman, we have the key to the solution of the great problem before us. When the American nation shall rise to an adequate conception of its unparalleled opportunities, its grave responsibilities, and solemn duties in the right education of the whole people, then will it enter upon a career of prosperity and true greatness, of which the past is but a faint foreshadowing. Then, statesmanship will become something more than partisanship, and the most successful self-seeking will be that which honestly and faithfully seeks the greatest good of the greatest number. Then will the true sources alike of individual and general prosperity become universally recognized and regarded; for they will be understood to be one and inseparable. Then will class legislation cease. Then will the means for promoting happiness be better understood and more wisely applied. Then will the magnificent

material, social, and political advantages vouchsafed to us by a beneficent Providence be subordinated to the grand purpose of developing a higher and nobler civilization than the world has yet seen.

Far be it from me to assume that our schools and higher institutions are to be the sovereign remedy for all the ills that afflict humanity. They are human agencies, and even in their best estate must partake of the frailties appertaining to the race. On the other hand, we must and do recognize the family, the church, and the press when kept within its legitimate sphere, as prime factors in the solution of the problem under consideration. And so, too, such a government as ours must be acknowledged to be a powerful moulder of the character of its citizens. This cannot be otherwise. Itself the embodiment of the will of the people, it is the will of the people reacting upon themselves, and the potency of its influence is neither to be denied nor disregarded. But there are ignorant heads of families, and the ignorant cannot educate the uneducated. There are educated parents who unfortunately are not skilled educators, and who feel and acknowledge their incompetency rightly to guide and direct the mental and moral unfolding of the charge committed to their keeping. It is no stretch of the truth to affirm that these two classes of the community form a vast majority. What then is the alternative? It is idle to affirm that the family must do what a great majority are manifestly unfitted, and many others are indisposed, to do. And since the church, in its merciful ministrations, yet reaches but a portion of the people, even in the absence of other insuperable objections it is inadequate to grapple with a problem so vast and far reaching.

The school, then, must supplement, and, in a certain sense, become a substitute for the family, in the special work of educating the rising generation. The teacher must stand *in loco parentis.* The disabilities of the family in this direction can be removed only by influences and agencies outside of itself, and what but the school can be made adequate to the task? If all the fathers and mothers of the coming generations are ever to become competent educators even for the first six years of susceptible childhood, with its thought-thrilling possibilities of virtue and vice, honor and shame, then it is evident that the principal business and the sum of all the duties of the people of this country must be the organization and promotion of education through all the appropriate agencies that experience and wisdom can devise.

The necessity for a constant advance in the standard of American citizenship will be apparent from a moment's consideration of the amazing changes that have occurred and are constantly occurring, through the progress of scientific research and the subjugation of the powers of nature to the uses of man. With the increasing differentiation of industrial and commercial pursuits, there must necessarily arise a corresponding complexity in our social and political relations, and a higher order of intelligence and directive skill is demanded by the people, to the end that their duties, as individuals and citizens, may be the more acceptably discharged. To cast the ballot intelligently and wisely is a more responsible function to-day than fifty years ago, and yet the average qualifications of the voter are probably lower now than ever before. Speaking in this august presence for myself alone, I make bold to utter the conviction that the most stupendous mistake of

American statesmanship in the past, has been the unconditional bestowal of the suffrage upon such masses of men, both white and black, that were totally unfitted to exercise it wisely and well. We should need no more effective compulsory education law than a just and adequate educational test as a qualification for voting.

Another consideration of vital importance in this connection, is that which refers to the dangers attending vast accumulations of wealth by gigantic monopolies, of which some of our great railway corporations may be taken as examples. According to the latest statistics there are not far from 75,000 miles of railway within the limits of the United States. Their nominal capital is more than $4,000,000,000, and their gross receipts over $500,000,000 annually, sums greatly in excess of our national debt and revenue. An able writer in one of our standard periodicals speaking on this topic thus remarks:

"All this sum is capable of being controlled by a very few men; on all questions where railway interests conflict with the interests of the public, the influence of this wealth is a unit against the people. It employs armies of men in operating the various lines; it is one of the best customers of the press; it controls the telegraph lines, has the readiest access to the public ear, and is the all-powerful abettor or terrible foe to political aspirations. Many of our laws are made in its interest, and along every line of railway the best legal talent is frequently employed in its service."

Again:

"Instances are not wanting where representatives of the people, while holding official positions, accept retainers to advocate claims adverse to the *rights* of the people. A railway corporation is soulless and yet immortal. Wiser than philosophy, it has found in a perpetual charter the elixir of life. When our fathers abolished the law of primogeniture, they supposed the country was secured against the evils of vast individual wealth accumulating from generation to generation, because the certainty of death would bring the certainty of distribution. But a perpetual charter, granted without consideration, has become a spindle to twist the gossamer thread across the chasm of death. All this vast and constantly-increasing wealth is under irresponsible control. A corporation can neither be hung nor sent to the penitentiary; that is to say, there is an entire absence of individual responsibility. Vigorous, alert, all-powerful and perpetual, it only needs unscrupulous managers to become a worse tyrant than Nero, a more dangerous master than Robespierre."

For these and other existing evils and threatened dangers, there can be but one effective remedy. That remedy must be sought in the better education of the great mass of the people. Illiteracy must be exterminated at whatever cost. Our schools for elementary instruction must be perfected and their blessings extended to every hamlet where a reasonable being can be found to be trained for the responsibilities of a sovereign citizenship. To this end it would appear to be indispensable:

1.—That the General Government, while not interfering with the State and local systems of schools, should yet, by all legitimate and proper means, encourage the improvement of those already existing, promote and, if necessary, enforce the establishment of others in all destitute places, and use its means and influence to collect information from every available source and diffuse it with a paternal and generous hand to every part of the republic. However much the rising generation may need instruction adapted to its years, the *people* everywhere require light as to their own duties in the premises quite as urgently.

The progress of education in many parts of the country is retarded more by the lack of knowledge concerning its means, ends, and benefits, and, consequently, by the prejudices of the people, than by all other causes combined. Therefore, let there be light, from a source which alone is capable of concentrating and diffusing it. As a first step in this forward movement, let not the Centennial year close before the National Congress shall dedicate forever the proceeds of the sales of our remaining public lands to the education of the people.

2.—In this new departure that is to characterize our second century, in the grand advance along the whole line, of our educational forces against the hosts of ignorance, the TEACHER QUESTION comes to be one of the first magnitude. If the race is ever to be raised from the degradation of ignorance, it must be through the mighty power and inspiration of true teaching, brought to bear at that period of life when all things are possible. The blind cannot lead the blind, the ignorant cannot enlighten the ignorant. Only the trained and skilful artist can mould the crude and shapeless forms of nature into images of divine symmetry and beauty. As we establish schools of art to develop the artistic talent, so we must establish and indefinitely multiply schools for teachers to develop the teaching talent. Normal Schools and Teachers' Institutes must go wherever the common school goes, and must be made equal to the work of supplying every school with "an able master worthy of the high vocation of instructing the people."

3.—In all our higher institutions, our colleges and universities, professorships or departments of education should be established, in which its history, principles, ends, and means should be thoroughly studied by those who are to occupy places of influence in society. If this nation is ever to become properly educated it must itself become a nation of educators. When agriculture, mining, engineering, and the like are deemed of sufficient importance to be allowed a place in the courses of the higher institutions, surely Education, the chief and universal interest of a free people, should demand a patient and careful consideration from all.

4.—The Kindergarten should be incorporated into our general system of education and become the connecting link between the family and the common school. Vast numbers of children are spoiled by wrong management before reaching the primary schools. As the argument of this proposition will be most impressively enforced, through illustration and example, by experts, before the Elementary Department, this afternoon, I am happily spared the necessity of pursuing it farther.

5.—Our National Bureau of Education must not only be sustained with an unstinted liberality, but its working force must be enlarged and its powers and functions increased to correspond with its growing importance and with the demands made upon it both at home and abroad. What a strange spectacle to see a nation of forty millions with a government based upon the intelligence of its people and yet grudgingly consigning the paramount interests of education to a bureau of an already over-burdened department! The value of the service already rendered by this bureau even in its restricted condition can never be measured. What it might do under a more wise and statesmanlike policy on the part of the government can be conceived only by educators who feel the pressing need of the service it

would be able to render. Time will not permit a more extended reference to this important agency in our educational work. But I venture to suggest that this Association at whose solicitation the bureau was established, take immediate steps to urge upon Congress the importance of providing for the publication of not less than ten thousand copies of its invaluable reports for its own distribution annually.

6.—American statesmen must rise to a proper conception of the grandeur of their opportunities and the magnitude of their duties in respect to the education of the people. And here I will content myself with a simple quotation from one who being dead yet speaketh with an eloquence which none can surpass. Says Horace Mann: "In our country and in our times, no man is worthy the honored name of statesman who does not include the highest practicable education of the people in all his plans of administration. He may have eloquence, he may have a knowledge of all history, diplomacy, jurisprudence, and by these he may *claim* in other countries the elevated rank of a statesman; but unless he speaks, plans, labors at all times and in all places for the *culture and edification of the whole people*, he cannot be an American statesman."

In conclusion let me speak a few words in behalf of this Association as an agency in the great work of the future. Allusion has already been made to the fact of its modest beginning. Forty-three members were enrolled at the time of its organization. Thousands of the most active educators of the country have since participated in its deliberations and the best thoughts of hundreds of the best minds devoted to the work have been embodied and widely distributed in the reports of its proceedings, of which about five thousand volumes have been published. It was mainly through its direct agency that the Bureau of Education was established. Probably no one instrumentality has done more, directly and indirectly, to draw this great interest into the arena of National discussion or give it character both at home and abroad. Sustained hitherto solely by the voluntary contribution of its members who gather from all sections of the union at considerable pecuniary sacrifice, a necessity has arisen that some additional provision be made for enlarging the sphere of its usefulness by securing a moderate, permanent endowment. Shall the work be undertaken at this auspicious, centennial season? What more appropriate time or place could be presented? Here, where are assembled the men and women of large hearts and strong hands, here in this beautiful city, whose appreciation of universal education is attested by its magnificent system of public schools, by its comprehensive charities and reformatories embracing provision for every want and weakness of erring humanity, and last but not least, by its Johns-Hopkins endowment for a grand university, the largest bequest ever made by a private citizen for educational purposes, here is the place and now is the time to accomplish the task.

With this end attained we shall move forward to the great future with hope and courage, prepared to act well our part in the subjugation of ignorance and in achieving the patriotic purpose of elevating our country to that high eminence for which a merciful Providence so evidently designed it.

Dr. E. T. TAPPAN moved that that part of the President's address referring to an endowment be referred to a special committee. The following named gentlemen were appointed: Messrs. S. H. WHITE, M. A. NEWELL, JOHN HANCOCK, JAMES CRUIKSHANK, and E. T. TAPPAN.

On motion of W. D. HENKLE, the following persons were appointed a special committee on the Bureau of Education and Public Lands: J. P. WICKERSHAM, Pa., W. H. RUFFNER, Va., J. H. SMART, Ind., B. MALLON, Ga., J. H. HOOSE, N. Y.

After the appointment of this committee the Association was entertained with music. All further reference to music will be omitted, except in a note at the end of the minutes of the General Association.

On motion of W. D. HENKLE, JAMES CRUIKSHANK, of New York, and A. ARMSTRONG, of Iowa, were appointed Assistant Secretaries.

EVENING SESSION.

The Association met at 8 o'clock.

S. H. WHITE, from the Committee on Endowment and Life-membership, gave notice of a proposed amendment to the constitution, increasing the fee for Life-Membership, and providing for Life-Directorships, and the appointment of a Board of Trustees, to have charge of the safe keeping and investment of funds.

On motion of the treasurer A. P. MARBLE, of Massachusetts, GEORGE R. NEWELL, FRANK ABORN, and C. C. ROUNDS, were appointed Assistant Treasurers.

The President announced the following

Committee on Nomination of Officers.

D. B. HAGAR, Mass.,
C. C. ROUNDS, Maine,
JAMES CRUIKSHANK, N. Y.,
J. P. WICKERSHAM, Pa.,
B. C. REED, Md.,
KATE S. FRENCH, N. J.,
Z. RICHARDS, D. C.,
S. H. WHITE, Ill.,
J. H. SMART, Ind.,
W. H. RUFFNER, Va.,
E. S. JOYNES, Tenn.,
B. MALLON, Ga.,
H. S. TARBELL, Mich.,
H. A. M. HENDERSON, Ky.,
WM. T. HARRIS, Mo.,
E. T. TAPPAN, Ohio,
C. A. MOREY, Minn.,
W. E. WILSON, Neb.,
Mrs. E. S. CARR, Cal.,
W. E. CROSBY, Iowa.

Mr. ROCHE, of Washington, referred to the system of Higher Education in vogue, and asked permission to give his views of needed improvements. Dr. HENDERSON, of Kentucky, raised the question whether the division of the Association into Sections was a constitutional provision. The chair so decided. He gave notice of a proposition to amend the constitution so that all business should be transacted in the general session.

The Rev. A. D. MAYO, of Springfield, Mass., then delivered the following address on

THE DEMANDS OF THE COMING CENTURY ON THE AMERICAN COMMON SCHOOL:

The establishment of the government of the United States found New England, alone, in possession of a system of free schools for the whole people. Every great, good idea or constitution is the child of all things great and good that came before, but is also original, like every new child born into the world. A people at a white heat of consecration for civil and religious liberty assimilates history and strikes out great central plans which include the possibilities of coming generations. The colonists of Massachusetts Bay struck the key-note of the American system of education and their earliest statutes contain its fundamental principles.

These fundamental principles are the following:—1st. That every child shall be freely offered the opportunity to obtain the intelligence and education essential to citizenship in a Republic. In the original statutes of Massachusetts Bay we find also the idea of compulsory education which this year has come to the front in the message of the President of the United States.

2d. That this education shall never be controlled by any party or sect, ecclesiastical, social, literary, or political. The common school shall be the child of the people, depending on the whole people for support and supervision.

3d. That the whole people be finally responsible for the cost of common education, that the schools may be free. Private aid was not discouraged; indeed from the first the rich Yankee felt the stress of a public opinion that to-day will not let a wealthy New-England man sleep quietly in his grave who has not given something to educate the people. But when private effort ceased, the people came in to sign the great bond of free instruction for all the children of the State.

4th. That this education as to quality and quantity shall be the best that can be obtained. The schoolmaster and schoolmistress of the old time were the flower of the youthful learning and character of the neighborhood;—the college students and graduates; the daughters of the minister, the doctor, the judge;—the best was none too good. As to quantity, they declared that the children should have all the education the people could be persuaded to pay for. Chief-Justice Shaw ruled that it was lawful to teach Hebrew in the common school if the people desired to pay for it. The New-England people began by giving generous State aid to every grade of education and the people of the United States have kept step to that music even to this day.

5th. That this school, from primary to college shall be essentially a school of character, imparting intellectual discipline with an eye to the making of the citizen and the ennobling of the man. The ideal of character in the school-room was the Christian ideal of the New Testament. In defence of the civil and religious liberty of the citizen and in tender reverence for the dawning conscience of the child, it insisted only on the fundamental elements of character, everywhere in christendom held as the commonplaces

of public and private morality. But it never conceived the mischievous theory that respect for the individual conscience demands the expulsion from the school-room of everything any man may declare sectarian in morals or religion. Neither were they caught by that fallacy, repudiated by every great educator in the world, that mental training may safely be conducted apart from good discipline and instruction in the moralities that establish character.

On these great pillars the people of New England built up their system of colonial popular education. The outcome of that school-house was seen in the war of the Revolution when these colonies gave 155,000 soldiers to the country; nearly three-fourths the entire number of men, 218,000, who followed Washington from Boston to Yorktown. So was this problem demonstrated, that the free education of the whole people makes for the patriotism and freedom that are the soul of a Republican State.

The first question to the newly-established Republic was, substantially:—Can this New-England system of popular education be nationalized? New England was still a country of liberal Englishmen of the middle class. But New York was cosmopolitan from the first;—Pennsylvania rent by fierce sectarian rivalries; the Southern Atlantic States feudal; and beyond the Alleghanies half a continent awaited the occupation of all who would freely come.

The past century has been occupied by the working out of this problem: whether the Republic can receive a common system of culture and whether its key-note was struck in that first overture on the stormy coast of Massachusetts Bay.

It may not have occurred to those who persistently deny the right of the general government to interfere in the education of the people, that it did interfere in the beginning and, by one act of consummate statesmanship, virtually established the common school of the New-England colonies as the American system of popular education. In the memorable ordinance of 1787, which created the West, the Congress of the Confederation wrote this far-reaching sentence:—"*Religion, Morality, and Knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged.*" Bound by this compact, the new West received the most magnificent grant of public lands ever bestowed by a nation for popular education. Thus did the national government establish the free school in the new Republic and assert its right forever to aid and protect the children of the whole people in their divine right to be taught and trained for the citizenship of a free Republic. The leaders in western Education brought to the Northwest the radical foundation stones of the New-England school-house and College, and on these foundations have raised a structure, already the pride of the nation and the admiration of the world. In the later methods of instruction and details of organization, our western education has assimilated the most valuable elements of the German and British theories; but in every essential respect the American school beyond the Alleghanies to-day is the logical outgrowth of the colonial school of New England.

The only real conflict has been in the middle and Southern States. And the strategic point of the battle of the schools has been the State of

New York; a commonwealth imperial even in its errors, and, best of all the States, representing that cosmopolitanism, at once the glory and peril of the nation. In this State every cardinal principle of the original free school was obstinately questioned by eminent authorities. For half a century, American Education was debated in New York with an ability and persistence that no latter-day opponent of the American system can hope to rival. No State has furnished the cause of popular education more far-sighted friends than the Clintons, Randall, and Seward and in no State has the cause so often been in such deadly peril. New York abolished her rate-bill in 1850, thus assuring the freedom of elementary education. In 1872 the city of New York, erected the noblest Common-School building in America as a free high school and normal college for girls, supplementing her free academy for boys. In 1870 Cornell University arose by the united munificence of private gifts, State, and nation, opening its broad gates to men and women. And on the 4th of May, of the present year the old city of Albany, most stubborn of all conservative communities of the North, laid down the rusty arms with which for two hundred and fifty years she had fought the advancing power of popular education and dedicated her first free high-school house, a temple worthy a victory in such a cause.

The victory in New York established the common school in Pennsylvania and New Jersey down to the Southern line. Such plans and ideals of education as filled the souls of Washington and Jefferson will keep. When the day of providential deliverence came, the people of the South made haste to adopt the American common school. Already is the common school in the South an established fact. And, happily, in this new soil there is no bar to the adoption of the finest methods of instruction and organization. I have never been so touched as by the singing of the colored children in the schools of Washington and have seen on their blackboards ornamental drawing of which old Boston might be proud. And there are communities that boast of pilgrim descent in New England where the methods of primary instruction are inferior to those in the new log school-houses in the pine-woods of the Carolinas.

So has the American common school emerged from its century of trial and now stands up, essentially the same as an hundred years ago; yet broader and more complete in all its details; enriched with the contribution of the finest European thought and practice; marvellously adapted to every community to which it comes; another, and yet the same,—just as you behold in the gracious woman who leads the social life of a new city on the Pacific Coast, only a revised and adorned edition of the little old grandmother that has come three thousand miles from dear Yankee-land to live out with the granddaughter her closing days; the same, plus all that culture and contact with finest native society and foreign travel can do for her. And as when she dresses herself in the old-time costume at the Centennial ball, her grandmother seems to dance once more before our eyes, so the American common school is the original thing that came out of the brains and hearts of the original school committees down East who "builded better than they

knew," as men always do who build anything in the spirit of reverence for man, in humble dependence on the favor of Almighty God. And, as the old Continental common-school boys and girls won our independence, so the Republic was saved to Union and Liberty in the great war of reconstruction by the men and women who had learned the lesson of patriotism and freedom in the common school. The manner in which this great work of establishing the National common school has been achieved reveals the most characteristic feature of the American mind;—its marvellous executive common sense. This roundabout, practical, wholesome, right-minded common sense of the people is the most original force in government yet developed by American history. To that we owe it that neither the pedagogues nor the priests have been able to impose their wrangles upon us and array the people in hostile camps on their rival systems. The people have always been able to see the kernel of truth at the bottom of every pile of chaff and in some way, often homely and informal, appropriate the best and avoid the sharp issue of contending factions. And on that same common sense, instructed by the great experience of the last fifteen years, we rely to save the American system of education already gained, to appropriate all suitable things from abroad, to vanquish every enemy of the public school.

This popular common sense will repudiate class education and keep the whole public school open to the people. The great danger in our country is an alien class apart from the body of the Republic, at the mercy of the political, social, or religious demagogue. The cure for every ill that lurks at the bottom of our social scale is to tie the lowest and highest class together in the bonds of a common citizenship and then arouse the higher side of the nation to educate the lower. There is more philosophy in the old nursery rhyme about the man that "jumped into a bramble-bush and scratched out both his eyes," then "jumped into another bush and scratched them in again," than in many a solemn warning of professional political economists. For a whole people can only be kept alive to their common duties by having on hand some uncommon and perilous situation. Thus we may expect that during the coming century our people will insist that every child shall have the opportunity of the best education its circumstances and ability will permit and every parent, if necessary, shall be compelled to respect his children's right to the instruction that makes for good American citizenship.

The people will not heed the clamor against the higher education at public expense that just now is on its periodical airing even in cultivated circles of the North. It is refreshing to see the patient, persistent way in which the whole people moves on to the accomplishment of a desirable thing. A foreign observer, shut up with certain classes of worthy people in our great cities, might fancy there was a question before the country whether the State shall aid in any save the elementary education. But in fact, the enlightened masses have never wavered an instant on this point. While the President of Harvard University proclaims that the State must withdraw from the support of all save elementary training for youth, the commonwealth of Massachusetts, that made Harvard, is preparing to admit a new class of towns to the opportunities of the new free high schools, is spending

literally on its new Normal School of Art and its new Agricultural College. The State of Maine has established two hundred new high schools within the past five years. Every year the great West is more determined to open every avenue to the free higher culture through the State University, the technical, artistic, and industrial schools and the great public libraries that are the real seminaries of the people. This argument is closed. The people have decided that the "sphere" of every American child is the best life possible to him and nothing is too good for the boy whose vote may elect the President of forty millions of freemen, or the girl who may become the mother of that President.

But, just here, appears that rare and reconciling popular common sense which reaches a decision in the wisest way. There are great difficulties to overcome before every grade of education shall be free as the air and light to every American child. 1st. The vast majority of children can scarcely remain in school five years and no compulsory law can help the matter. 2d. As our civilization expands, the division in labor will compel a greater complexity in our school systems and this will increase the burden of the people. 3d. There is still a gulf of separation between the people's high school and the ordinary college with no great effort in the latter to bridge the chasm.

But these seemingly-insurmountable obstacles are being overcome. The lack of time in the average child will compel the introduction of more radical methods of instruction. The majority of American children have time to be awakened to the love of knowledge; time for the training of the faculties by which knowledge is acquired and for an introduction to the elements of that circle of studies which will fit them for life as worker, citizen, and man. A youth, dismissed from a school after five years faithful training by the finest methods, is able to learn a trade, use the public library, the newspaper, the platform, and pulpit and grow up into an intelligent citizen, competent for any duty ahead.

The growing expensiveness of our higher schools is being met by the munificent private donations of large-minded friends of education. Our public libraries, schools of art, mechanical, normal instruction, our State universities, are often built up on the double foundations of private benificence and public aid. This common-sense way of calling in the State Hercules only to give the final lift has carried us safely over what might have been an ugly conflict in our system. The great need, to-day, is that our wealthy people should direct their attention to these institutions for secondary education and by judicious endowment so anchor this side of the people's school that neither the squabbles of political parties nor the poverty of the people should wreck this precious interest.

The people will finally insist that the university system of our country shall make a fair and square connection with the schools in which the intelligent mass of American children are educated and especially that the best methods of instruction shall be accepted in the higher as they are now in the lower grades of school life. The second-class American college is now the hiding-place of a pedantic and obstinate old-time pedagogy which scorns suggestion of improvement and hugs its dreary

curriculum of badly-taught classic and mathematical lore like a fetish. The higher education means essentially the highest way of teaching all things and our universities must meet the people half way in their effort to exalt the entire culture of the Republic.

The chronic chafing between the teachers and the school committees and superintendents will be overcome in the future, first by raising the standard of teaching ability to the point that there shall be in every community a class of professional teachers, entitled to weighty opinion on school affairs;—2nd. By placing on these boards of direction a fair representation of the most competent men and women to direct in school affairs. Of all people the common-school teacher should be given sea-room to manœuvre his craft, unvexed by teasing and microscopic supervision. Still no professional class in America is wise enough to be entrusted with the sole responsibility of the school training of American children. The most important feature in our national school is its perpetual supervision by the representatives of the whole people and only thus can it be kept out of the ruts of scholastic pedantry, on the highway of that broad culture which shapes the men and women the Republic demands.

The "Religious Question" will not destroy the American common school, because our people will obstinately refuse to be switched off the "straight and narrow way" in which they have always walked, to fly into a national debating society on Christian or anti-Christian creeds. The public always meant just what they now mean by "Religion in the common school"—that instruction in common Christian morals and training in character which will fit the child for American citizenship. And the only practical question in the matter is:—who shall decide what style and amount of moral instruction and discipline is essential to honorable American citizenship? The ecclesiastical dignitaries who are trying to divide the school funds, virtually say:—the clergy of a dozen sects shall decide, each for their own disciples, what that instruction and discipline shall be. This would make the clergy a nest of ecclesiastical rings to manage the school life of the children. But the American people professes to be competent to decide what style and amount of moral instruction and discipline is essential to good citizenship. And that it proposes alone to pay for and will officially enforce in all public schools from the Kindergarten to the Universities. So far, the people have taught and enforced a school discipline founded on the Christian ideal; implying a common belief in God, the moral obligation, spirituality and immortality, of man; which underlies our whole scheme of government and society. There are no indications that this radical notion of morality and the discipline of youth will change during the coming century. And, certainly, if anybody has a divine right to say what shall be taught and enforced as public morality in the national schoolroom it is the people who, under God, made the country by their toil, their treasure and their bloody sacrifice. And the pretence that the sovereign people is bound to vacate this port of moral judgment in behalf of any class is a claim that would split this nation into as many atoms as there are stubborn people on the soil.

And equally determined are the people that the children shall be educated with as little wear and tear to the parental conscience as is consistent with the right of the public conscience in the premises. They will use the Bible in the school as a help to moral discipline, not as a horn-book of theology. They will hold teachers to the wise use of their instruction in moral duties; especially will insist on that elevation of character in the teacher which all day long preaches louder than the Holiest words. By all persuasive arts and methods of instruction; by music and Christian manners; will they strive to wrestle with the old Adam in Young America. And especially will they insist that the discipline of the school, which is the chief factor in its moral instruction, shall be revised perfectly in the direction of the law of love that rules the universe of souls. A Christian bear of a schoolmaster or a pious virago of a mistress who alternately pray for and thrash their little community do not form the American ideal of religion in the school; but a teacher and a code of laws and government which are the sweet outcome of the life of love to God and love to man. If this is "secularism," the American school will be secular. If "Secularism in schools" means that a little squad of people who believe in nothing that anybody else calls religion shall have the power to forbid the United States of America teaching and enforcing Christian morality and to brush the Holy Bible, of all books on earth, from the teacher's desk, it will not be accepted. Surely, standing as we do amid the public and private scandals of this Centennial year, this National Association of teachers with no uncertain voice, should demand that the national school shall forever be kept the training school of the loftiest type of American character for American youth.

So far the work before us is a work of preservation of the results of the past. But no Republican institution can be essentially preserved without perpetual effort for its expansion and reform. The conservation of the common school does not mean the rearing of a system of Dutch dikes to keep out the sea and save a garden-land already reclaimed from a deluge. Rather does it mean the deepening of the channels and the opening of the mouths of a Mississippi that, from the gulf to the remotest log cabin in the mountains, every dweller upon its banks shall feel a new thrill of life and the grandest latent energies of the whole people be summoned to "have free course, run and be glorified" through the century to come.

The first onward step is actually to plant an elementary school, of the most approved modern type, in every neighborhood in the Union. This will demand thousands of new establishments in neglected regions and the wholesale regeneration of the country district school through vast areas of the older States. Nothing would so freshen the neglected rural life in the North and control the terrible mania for herding in our new and crude cities as a superior elementary school in every district. For out of each of these little fountains of intelligence and patriotism would flow a pure stream of living water to refresh our private and public life. How far we can use the continental compulsory system to bring the multitudes of untaught children into these or any schools is difficult to say. We Americans have a wholesome suspicion of a civilization pricked

in by the bayonet, but we have a greater respect for a strong public opinion than any people on the face of the earth. All the truant-officers in christendom might chase young Jonathan "from pillar to post" in vain, while a public opinion that would search his Father's house like a keen north wind would bring him to his bearings and make him a man. Every right-minded man and woman in every community should now insist on the best possible elementary school, frown upon the public stinginess, the family, church, or caucus-ring that threatens it; and make it uncomfortable for any foe of the children's birthright to live anywhere on this continent.

The second step onward is the establishment of an effective system for training teachers for these elementary schools. Notwithstanding our useful State system of normal seminaries, the vast majority of teachers have not even the aid of an occasional swelter in an August vacation School Institute;—too often only an educational picnic. Any system that proposes to train teachers for elementary instruction must be mortised into the schools of the locality, grow out of and be fed by the higher grades of grammar or high school and relieve our young women from the expense of residing away from home. A training school in every village with the best teacher for principal and a primary room for a practice school is perfectly feasible. Every college should establish a course in pedagogy in which young men and young women can be reclaimed from the abstract moods of university training and introduced to the human nature they will find in the high school classes they now attempt to teach. A course of study is only a creed and the teacher its prophet and unless the prophet is the creed incarnate, the people, great and little, in church and school-house, will not be saved.

The educated people in every State should demand an official supervision of schools that will bring every teacher who handles the money of the commonwealth to face a well-defined examination, directly or indirectly overlooked by a board of State inspectors. The same board should cover the State with a careful supervision of school work and refuse public aid to every locality that shirks its duty. One of our worst public abuses is to levy a State school tax on our cities, to be distributed among a thousand country neighborhoods which go on in perfectly irresponsible ways, often wasting money for that which is not a school in any real sense. Supervision is the back-bone of every system of schools and never was a national system of instruction so weak in the spinal column as the American system to-day.

And the coming century will complete that system of beneficent oversight of the school which was contemplated by Washington and has waited like many another far-sighted ideal of the last century to be sprouted in the present Department of Education at Washington. In the present healthy rage for economy it might be good to establish one more "Committee of investigation" to inform the people how the various States are using the enormous educational endowments from time to time bestowed by Congress and hold those who have wasted them to a strict account. Of all stealing in American politics that which filches the children's bread to throw to the political dogs is the most intolerable. And it would seem no stretch of na-

tional prerogative to insist that every State should secure to every child the opportunity of a free elementary education; else an invasion of barbarism more deadly than the horde of ancient Gauls that stormed into the Roman senate, in an hour we know not, may astonish the world.

And, finally, the national government should amplify its present Bureau of Instruction and make it the educational Clearing-House of the Republic; the place where every man can go to learn the actual state of Education in America and be put at once in contact with the educational systems and authorities abroad. And instead of another half-endowed and struggling college at Washington, the government should make haste to repair the grievous injustice that for seventy years has refused to the National Capital the grant of public school lands bestowed on the most remote and barren Territory. With such timely aid we might behold in Washington the real National University;—a system of model schools, of every grade, from primary to collegiate, technical and artistic, each the best of its kind, a perpetual instructor to the South and the far West, where every observer from foreign lands might behold, in miniature, the American way of making American citizens out of "all orders and conditions of men." Then, when the nation has fully assured the education of every child, will the brow of the statue of Liberty that crowns the capitol kindle with the flush of a new sunrise that shall chase the darkness from every hiding-place of ignorance, superstition, and sin and and reveal the new Republic as "that blessed nation whose God is the Lord."

The Hon. Neil Gilmour of New York opened the discussion of Mr. Mayo's paper. He said he would present and emphasize two or three truths. Little boys are good to make men of, and people in all ages have regarded the educational problem as of the gravest importance. Our children must be educated; if our free government is to stand. Popular ignorance is the direst peril, and from their immoralities nations perish. We have attained a high and worthy position; but this beginning of our second century is an auspicious time to begin wholesome reforms. He dwelt at length upon the necessity of trained teachers, and the means of securing them. Communities must be educated as well as the children.

The Hon. J. H. Smart, of Indiana, said:—The purpose of the school is to ennoble the man to realize the highest purpose of life, to become a good neighbor—a good citizen—a free man. The present time specially demands —1st. That those who are called to teach should understand that character is of more importance than arithmetic and grammar. 2nd. That we understand that our financial prosperity depends upon skilful labor and the ability to use knowledge. 3d. Just now is the right time to redefine liberty. There is a false notion among boys and girls. It means protection and restraint.

Adjourned to meet at 9 o'clock, A. M.

TUESDAY MORNING, JULY 11th.

Association met at 9 o'clock. President PHELPS in the chair. Prof. EDWARD OLNEY, of the University of Michigan, read the following paper on

THE COUNTRY-SCHOOL PROBLEM.

Mr. President:

My apology for appearing before this body with a paper having the same title as one presented by yourself last year at Minneapolis, is that you asked me to do it. What your motive could have been I can only guess. Perhaps it may have been that, judging from some remarks which I made at that meeting, you deemed it desirable that I should give more careful study and thought to the subject, and took this as the best method to induce me to "study up." At any rate, I have added to a life-long interest in our public schools, and abundant opportunity to observe the workings of our system in the rural districts, a careful re-study of their present condition and needs, and the best reflection I have been able to give to the question how to meet these needs.

I believe, Sir, that you considered your paper of last year as little more than a statement of the problem, the limits of a single paper forbidding any considerable attention to its solution. It is, therefore, to offer hints upon methods of solution, that I am summoned. Allow me, however, briefly to reproduce the statement, and offer a remark or two upon it.

By our Country Schools we mean those schools situated in the more sparsely-settled districts, where a single teacher is required to conduct the entire school, thus precluding the idea of grading. These schools are usually intensely local, being the creatures of the particular school district, which, in extent, is but a small part of a township, though not infrequently lying in two or more contiguous townships. The limited resources of such districts, and the directness with which whatever is spent upon the school beyond what the public fund supplies, comes from the pockets of the citizens, makes the available revenue for sustaining the school so small that the appliances in the way of building and apparatus will usually be quite meagre, and the qualifications of the teacher, and the length of time the schools continue will be reduced to near the minimum. Again, the intense, and ultra-democratic idea which is at the foundation of the system, and which seems to be an acknowledgment that in this matter of education every parent is to have his own will and way to the fullest extent, becomes the source of endless strifes and jealousies which often sadly cripple, if they do not entirely destroy, the usefulness of the school. So also, the *lack of permanency in teachers* or *methods* which this scheme entails, is utterly incompatible with a high order of excellence and efficiency. To these points so fully elaborated in the paper of last year, I would add an influence of our fine graded schools in the larger villages and cities. While in many respects the influence of these schools is exceedingly helpful to the cause of education, there is at least one way in which they tend to cripple the rural schools. The fact that they can and do supply a wider range of instruction, with better methods and appliances, draws from the rural schools the more ambitious and advanced pupils, thus taking from them the very elements

of a higher life, and reducing them of necessity to primary or secondary schools. Such being the conditions under which these schools exist, it is not strange that the results are painfully unsatisfactory to any one who realizes the demand of the times for a trained, intelligent, and virtuous citizenship, and the feeble influence of these schools in supplying it. Nevertheless, I am not of those who think our common-school system a failure, even in this its weakest point. I can not allow the justice of the method which inventories all the ills from which the body politic suffers, and then charges them over to the common schools. The family, society, the church, the press, the court, the legislature, the rostrums, have each and all their share in the responsibility of developing good citizenship, the school coming in simply as one of many factors, and that not the largest one, in producing the result. Nor is the school-room more the parent than the child of the results deplored. It is a fallacy to suppose that radical reform can be gotten in the school and from hence revolutionize the whole. The reform sought must be developed all along the line, in order that it be possible anywhere. With society superficial and false, and goverment corrupt, it is simply impossible that the school should be in wholesome condition. The teacher, who is the chief factor in the school, is but a member of society, and an element in the State. Let the press and the rostrum which declaim so loudly against the inefficiency of the schools to purify society, but reform themselves, and they will find the schools become fountains of health. Let us understand, that, especially with our social and civil constitution, all departments sink or rise together. We cannot have a corrupt legislature, and a pure judiciary;—we cannot have piety in pulpit and pews, and peculation and fraud in politics;—we cannot have false ideals, and vicious practices characterizing society, and pure and lofty aims with wise and efficient methods in our schools. The organization of our society is not upon the principle of guild and caste. The legislator of to-day may be the judge or the preacher of to-morrow. The man who is on the political rostrum to-day, may be at the teacher's desk to-morrow. All grades, all classes, all occupations, are so intimately related, and so habitually interwoven, that virtue in one member is quickly felt in all the body; and corruption in one, speedily infects the whole.

I think, Mr. President, that I dare claim, that of all the agencies which conspire in the production of American citizenship, the purest, the best and most efficient in its sphere, next to the church, is the school; and in this statement I include the rural or common school. We do not need to be told that the results which we this year celebrate are in good part the product of our common schools. These results speak not so much of the grand achievements of a few, as the wonderfully-intelligent and fruitful activity of the many. The marvellous exhibition of American intelligence and skill now being made in the adjoining city is not an exhibit of what has been done by a special class, but is only a specimen of the product of American art and civilization, and might, in most of its features, be many times duplicated without repeating the names of exhibitors. Nor am I dealing in glittering and irrelevant generalities. Let there be made a list of our effective men in politics, education, religion, art, manufactures, commerce, agriculture, and there will be found an astonishing number who were made what

they are, so far as schools are concerned, by the common school alone, and the foundation in the case of all was laid in these common schools, and very largely in the *rural* school. There is, and ever has been, a spirit of independent self-reliance begotten in these rural schools which is a wonderful germ. Why, Sir, you cannot find a rural school in the land but what is fully confident that most of its members are nascent presidents, judges, generals, or princes in art, literature or wealth; and the parents are as calmly confident as are the children. With such assurance of capability, and such conviction of "manifest destiny," many of the defects in the details of the preparation are readily supplemented by the inherent force of their ideals.

But I would by no means be understood as saying that we have nothing to desire in regard to our rural schools. I quite agree with the paper of last year that the improvement of these schools is the most imperative, and most difficult part of our work as American Educators. Nor do I believe that the end desired can be attained without *radical changes*. We have rung about all the changes on the old ideas, of which they are capable. the decadence of these schools has long occupied our thought; but when we have attempted to remedy the case, we have declaimed upon the apathy of public sentiment, the utter incompetency of teachers, the insufficiency of Normal-school work, or attempted new permutations on the district or township system, county or town superintendency, or no superintendency at all, or cried out for compulsory education, until these ideas have lost their force, if they have not been demonstrated to be inadequate. We need to preach a new crusade with new ideas, if we would arouse the public sentiment and set the machinery of our common schools to a more effective motion. We need a new generation of Manns, Searses, Pages, Wickershams, Andrewses, and Gregorys to preach not a new gospel, but the old gospel by new methods. Our first reliance must be upon arousing the people. But they can not be aroused by a rehash of the old ideas. It must come to pass that a lecture on Education will call out the people, as in other days. It may be as then, that at first, they will come out largely to criticise or to oppose; but they must be made to feel, and to care for what we as educators are saying and doing. They must be made to feel that there is practical power in our ideas, and not to look upon a brigade of schoolmasters as a parade of good, inefficient, impracticable, or superannuated men with wooden guns. They must know that we propose to do something that *they* will feel, that there is positive character in the methods we propose, and an energy in pushing them which they will either invoke or dread. In short, the people must be aroused from their self-complacent lethargy. They have come to think that our system has reached perfection, and to rest satisfied in what we have attained. They must be jostled out of these ruts even if the road be found less comfortable both for team and passengers.

Such being the attitude of the question it is fortunate that the germinal ideas having in them "the promise and potency" of the new life have already been discovered; although as yet they have lain like many another most useful engine for a long time in the philosopher's laboratory awaiting the favorable concurrence of events to bring them into practical operation. I will call your attention to four of these ideas:

1. Hereafter let the elective franchise be granted to our youth upon com-

ing to age only on condition of their passing a satisfactory examination before a properly-constituted Board. Let this examination cover Reading, Writing, Arithmetic, Geography, the Constitution of our Government, and American History. Having passed such an examination and given evidence of good moral character, let the name be registered among the voters of the land. Such a requisition as this will at once give the rural school a new function, and so deepen the interest in it, that all needed improvements will be readily effected. We may not deprive any who have exercised the franchise from continuing to do so, but the imperative necessity of guarding this sacred trust in some such way, in the future, is too apparent to need argument; and well would it have been for some portions of our land if we had years ago entered upon the measure. The circumstances making this a necessity to our political well-being, this is not the place to discuss at length, yet we shall do well to remember that already the great mass of illiterate, uncultured, un-Americanized voters are controlling the destinies of great cities in New England, of whole States in the South, and threatens to overrun our entire Pacific coast. Let us not start back from these sentiments, fellow-laborers. This is pre-eminently our work. Politicians will never do it. The movement must begin and be carried forward by the educators of the land, by those collected and represented in this room, by this Association, by the Teachers' Associations of our several States. When we come to understand that our work in the common school has such immediate and essential connection as this with the nation's political life, and begin to assert it in the ears of the people, we shall not lack for an audience, and people will not slumber under our preaching. Of course, we shall be stigmatized as meddling with politics; but who has a better right—who a more sacred obligation to meddle with politics than we? If now, the mere generally-acknowledged connection which schools sustain to good order in society, to efficiency in business life, and position in social life, if these vaguely-defined, and imperfectly-apprehended functions of our schools give them the life and dignity they have, let them be put thus in immediate, organic connection with the very foundations of our political fabric—let them be acknowledged as the legitimate and indispensable trainers of our citizen sovereignty, and what may we not hope for them? Parents will foster them as the only means of fitting their children for citizenship, pupils will seek and reverence them as the fountains of their correct political life, politicians will court them and be wonderfully complaisant toward all measures which look to their development.

2. Having thus put the common school into its proper place in our political organism, we shall next need to provide the means by which to insure the performance of its functions. Here we are met at once by the axiom, "As is the teacher, so is the school." But, having recognized the responsibility of the school in preparing for citizenship and thus laying the foundation of the State, the reciprocal obligation of the State to provide the school with competent teachers, follows as a necessary corollary; and further, if the State is bound to afford the means for fitting teachers for their work, and is dependent for its well-being on the manner in which these teachers do their work, it has the unquestionable right to require them to use the means provided. Hence our second suggestion is, that, allowing all who

may fairly be said to have entered upon the business of teaching to continue to exercise their calling under proper restrictions and supervision, no new candidates be admitted to the ranks of the profession who have not availed themselves of the means supplied by the State for qualifying themselves, and succeeded in attaining the necessary qualifications. By this I mean that our system of Normal training be so modified or extended as to bring within reasonable reach of every common-school teacher the means of adding to a good English education such a knowledge of the principles and methods of teaching as is requisite to good work in the school-room. How these opportunities are to be afforded, whether by multiplying Normal schools on the present plan, or by securing a Normal Department in connection with at least one good Public High School in each county, or by enlarging the scope of the Teachers' Institute, and making of it a regular annual three-months' training class in each County or Congressional district, all under a competent, well-equipped Normal Faculty, or by a combination of these methods, I am not so anxious to urge, as to urge that in *some* way, such provision for professional training shall be made accessible to common-school teachers, as will justify the State in requiring that those supported by the public treasury, and at work in the State educational service shall have had professional training which will be presumptive, at least, of fitness for the work which they profess to be doing. In order to this, it will doubtless be necessary that an examination be had as a condition precedent to entering such training schools, and that those entering them be found qualified so far as knowledge of the subjects is concerned, to teach the branches required in our common schools. The feature now urged is by no means a novel one in our government. It has long been incorporated in our army and navy service, and every argument which justifies it in these will apply with added force here. If it is the right and duty of government to provide means for the professional training of those who are set for the defence of the commonwealth, and to require that all who would undertake this work shall have prepared themselves specially for it, it is surely a clearer right and a more sacred obligation to require that those who are called by the State to lay the very foundations of the republic in the intelligence and virtue of its citizenship, should have fitted themselves for this momentous work. (*a*). The adjustment of this question will carry with it that of proper supervision, State and local. Its wise adjustment may develop a system of superintendence not yet devised. It may be developed as a fact that the most efficient method of supervising the individual school is to train and supervise its teacher, and that the more general work of securing statistical information, and keeping a record of the state and progress of the work falls into the line of clerical service to be performed in the State Bureau of Education. However this may be, whether it may appear that such an officer as a County or Township Superintendent of Schools in the old acceptation of the term, is necessary, or whether the supervision of the matter and methods of the teaching can be better secured through the training schools, one thing is certain, when the qualifications of teachers are thus generously provided for, and jealously guarded, their work will be intelligently supervised. (*b*). Again, the adjustment of this question will remove, or greatly lessen the evil of lack of uniformity and permanency of methods in our

country schools, by extending a knowledge of accredited methods, and insuring that all the teachers have been trained in them. It will not be so serious a matter if Susan Brown and Jane Smith, alternate with John Jones and George White in the same district in as many successive quarters, if all have been trained to intelligence and efficiency in the same methods, and have common ideals. Indeed there is a uniformity in the midst of diversity, which constitutes the perfection of system. (*c*). Moreover, by as much as such a scheme of training by the State removes the matter of determining the fitness of the teacher a little further from the neighborhood jealousies to which we alluded at the outset, its influence will be especially helpful in localities where the maiden niece of the Director holds possession of the school by what she conceives divine right; while all the unfledged and would-be schoolma'ms in the neighborhood envy and scandalize her.

3. But there still remains a most important consideration in the solution of our problem. We can not hope to build up an important branch of the public service, and supply it with competent workmen, without providing adequate means for their support. At the wages which have hitherto been paid common-school teachers in our country, a person can do nothing more than perpetuate existence during the time of service. This makes it absolutely impossible that any one should choose common-school teaching as a life-work, unless he is willing to accept a home in the poor-house in which to die. There are but two possible ways in which this evil can be remedied; one is to raise the wages of teachers until they shall bear some just ratio to the character of the service required, and afford an income from which it shall be possible to secure a home and a support for declining years. It is doubtful whether this can ever be done, at least anterior to the millenium. Especially will it be impracticable, so long as these wages, in any part, come as directly from the pockets of the employers as they now usually do. While this continues to be the case, and no other mode of relief is found, it is inevitable that our rural schools, and in large part the lower departments of our graded schools, will be in the hands of young women who teach simply because they must, until some more eligible or congenial method of subsistence presents itself; or by young men who make it a convenient stepping-stone to some more honorable or lucrative calling. But there is a most just and sensible method of relief; and I am happy that it has found so able an advocate in the person of George William Curtis; I mean the method of retiring on part pay, faithful teachers who have been a reasonable length of time in honorable service. That this is eminently just, and exactly in accordance with the practice of our government in reference to its military and naval officers, is apparent upon the mere statement. But we may not hope that because of its justice it will be readily acknowledged. The old ideas are too deeply rooted in the minds of the people to be easily eradicated. We shall need to be able to justify the claim by the soundest arguments, and urge it upon the people with the utmost persistence; and then, if in a score of years, we shall begin to see the method incorporated into our educational service system, we may count it a speedy triumph. We must show the utter impossibility of securing a corps of trained professional teachers, without such a scheme. We must show the fearful waste of money, time, character, and all that is valuable, which is entailed by a

system in which our schools are simply theatres for successive companies of crude, uneducated, untrained young men and women to experiment in, while they earn a few dollars to carry them over from the period of childhood to that of intelligent and effective maturity. Far wiser would it be to entrust our sick to the care of a similar succession of uneducated boys and girls who want some employment by which to feed and clothe themselves till they attain sufficient knowledge, training, and maturity to be capable of useful service in society; with the assurance that whatever of experience and wisdom in the healing art they might obtain during this period of adolescence, would never be used to heal our sick when when they might reasonably be supposed to have attained some fitness for the work.

We must show that by the present system, it is inevitable that our youth will come to maturity half educated, half trained, and quite unfitted for the duties of life. They cannot be expected to secure in the schools what their teachers do not possess; and who would claim anything more than half-education, and a very imperfect preparation for the duties of life, for the body of young men and women who teach our rural schools? They do not themselves profess to have attained anything more. They know they are not fitted for these duties and responsibilities, and are usually teaching our schools just because they are not, but are hoping to gain means or development and experience which shall fit them. With our common schools in the hands of the uneducated, and immature, whose characters are but half-formed, what can we expect but that our youth will leave these schools in the same state. Let us urge these and the many other considerations which a careful study of the subject will afford, until the evils of this system are in some measure apprehended, and until it shall be seen that this is one of the causes exactly adapted to fill our communities with just that class of unreliable, inefficient men and women from which we are suffering so much. When the people see so much of incompetence in their public servants, and such frequent giving way of character under strain, let them be taught to find one of the producing causes in this system which commits the training of our youth so largely to untrained and undeveloped teachers, who cannot beget in others that which is not yet formed in themselves. Let it be clearly seen that the remedy lies only in securing for our common-school teachers, men and women fitted, by knowledge acquired, by training received, by experience gained, by characters established, who shall be able to impress the stamp of their own well-developed, and symmetrical man and womanhood upon the youth they train. Let it be understood that such a body of teachers can never be secured until it is made practicable for our best men and women to make this their life-work; that in order to do this they must be adequately paid during the time of service, or honorably pensioned when no longer capable of effective service. The value of the service which would be rendered the State by such a body of professional trainers of our youth, would be infinitely greater than all the military training and service secured by our war establishment, however great that may be; and those who rendered the service would be in every way as worthy of honorable retirement, as are the officers of our army and navy.

4. The fourth idea to which I would call your attention is the importance of unification, and proper organic correlation in our system of public

schools. Our Public-School system should be an organized whole, from the lowest Primary, or the most obscure rural school, through the University course. In my own State this is beginning to be realized; but we have not as yet incorporated the rural schools in the scheme, nor is the link which connects the graded schools with the University a formation of the State, but simply a voluntary arrangement entered into between each school and the University. What is needed is, that, having secured a competent force of professional teachers, trained in the government Normal Schools, and fully accredited as competent for their work, and having all the schools organized upon a properly coördinated system, the work done in any one should be recognized in any other of the system. The rural school should be so organized, its curriculum so defined, its teacher so trained and certified to by the State, and the whole under such minute and competent supervision that the certificate of the school might be recognized in any corresponding, or next advanced grade anywhere in the State. In like manner the grading of our Union Schools should be so uniform, and the quality of the work so insured, that the pupil bearing the certificate of any grade in one would be admitted thereon, to the corresponding grade in any other such school. This arrangement of courses and grades in the Union Schools is in an excellent state of forwardness in some of our western States, through the persistent and intelligent efforts of our leading educators, although it is as yet a mere voluntary arrangement secured through mutual conference and coöperation. Finally, the certificate of the High School should be a passport to the holder to the next higher, or the College course. This is the link referred to above, and which you are are all aware is receiving the most careful attention in several of our States, such connection having first been effected in Michigan. The practical details of these methods the time allotted to such a paper does not allow me to present, as it also forbids even outlines of methods by which the preceding ideas can be realized. But how is such an arrangement to benefit the rural school, I may be asked? Will the mere fact that a pupil's certificate that he has passed certain grades in a rural school, will entitle him to admission to the next in any other school, normal or graded, in any way affect the school granting the certificate? No, indeed; the *mere fact* will not; but the necessary antecedents to such a state of things, which shall receive their proper recognition of existence in this manner, will do immeasurable good to the rural school. It is not the fact that it exercises such a right, but the fact, that it is brought into such condition as to make this its natural right, that is to benefit it. Once organized and equipped thus, the various parts of our public-school system will become mutual supports of each other. There will be a common interest running through the whole, and a jealous care for the well-being of each part characterizing every other part. If the rural schools suffer any peculiar disadvantages, it will be to the interest of the graded schools, and of all others to aid them in overcoming them. Nor is the dignity given to the particular school by being thus put into organic relations with a far-reaching and noble scheme, an intangible or ineffective thing. There is a wonderful power begotten of honorable relationships, and of recognized position and responsibility. Place the rural school in proper relations to the rest of our system of public schools; recognize in a tangible

manner, these relations, and provide that they may be honorably sustained, and you have insured the efficiency of these schools, and with them, of the whole system.

In conclusion, I want to exhort you, my fellow-laborers, not to hesitate to attempt great things. I fear that what I have outlined in this paper may appear like the impracticable dreams of a visionary, rather than like things to be striven for, with confident expectation of attaining them. But let me remind you of the power there is in an idea. Ideas rule the world. Start an idea which has in it useful, practical truth, and it sooner or later becomes an actualized fact. If the ideal public-school system here so imperfectly sketched, has a foundation in recognized principles of our civilization; if they are the legitimate outcome of our present partly-developed schemes of public education, let us seize upon them and hasten their realization. And well may we gather courage from the past. How well can any of us remember the pride with which the old-time Connecticut schoolmaster would stop us in our recitation in geography, and emphasize the statement that "Connecticut was noted for her common schools, and for the liberal provision of $2,000,000 as a school fund." But from the state of things then existing in the State of Connecticut, to that which has now become universal in a larger portion of our States, the advance is greater than from our present position to the full realization of each of the four ideas sketched in this paper. Let our State Teachers' Associations take hold of this matter, discuss, and urge forward such schemes of educational policy, and expect to mould the sentiment of the State and control and guide its legislation on such matters, and we shall have done with devising means by which to keep such Associations alive. They will have life in themselves. Some of us here to-day remember how such an Association in one of our States actually framed its educational system. How it completely revolutionized it, and sitting in the Hall of the House of Representatives in the capital, discussed item by item a bill then before the Legislature, and secured its passage essentially as it left their hands. Let our Associations again find such work and be doing it, and they will live because there is reason why they should—because they have something to live for.

When our government undertakes in this way to provide for the training of teachers, to create a teacher's profession as distinctly recognized as the military, and as adequately provided for; to establish a system of supervision and to organize the system of public schools on a scheme so complete in details, and so comprehensive in its working that each part shall have a recognized place and work, and that all work from the lowest to the highest is adequately provided for, the question of abolishing the Educational Bureau will be as little likely to be entertained or thought of as that of abolishing the War Department, and for exactly the same reason; it will be seen and felt by all to be a necessity to the very existence of our civilization and government.

An invitation was received from the President of the Board of Education of Baltimore, inviting the Association to visit the Rooms of the Board.

The discussion of Prof. OLNEY's paper was opened by Dr. D. B. HAGAR, of the State Normal School, Salem, Mass. He said the country-school problem presented different aspects in the different States. He dissented from the position of the lecturer upon the proposition that young men in order to enjoy the right of suffrage should pass an examination in the common-school branches. The establishment of a uniform system would be impracticable. He was not clear that any system of graduating diplomas from the lower schools can be devised that will universally admit to the Higher schools. He recommended not town schools but a head master for the schools of the town.

DR. RICHARD EDWARDS, of Illinois, believed that the people would manage their own schools; and they must be educated to apprehend and desire the best appliances and best methods. The drift of MR. EDWARDS's remarks was against centralization. The Hon. J. H. SMART, of Indiana, favored more centralization. He pointed out some of the evils of having the schools controlled by the people. WM. E. CROSBY, of Iowa, said we have already solved the problem of centralization in city schools. He had not found the politicians when properly approached, jealous of the schoolmaster. He said the laws of Iowa require a four-weeks' institute to be held annually in each county. The entire point is the permanence of teachers. He thought much could be done by the action of this Association and the State Association. The HON. R. D. SHANNON, of Mo., said the one thing necessary in Missouri to place the State in a front rank, is efficient Supervision. The people are so grounded in their love for education that they will let nothing stand in the way of their progress. Supervision was also needed over the public funds. Millions have been squandered. We are somewhat jealous of centralization. MR. SMITH, of Illinois, a county Superintendent, said country schools cannot be carried on in the same manner as village or city schools. The chief thing in the country is the permanent employment of the teacher.

W. A. BELL said he did not believe a word of what the last gentleman said, but he did believe all that the others had said, except retiring teachers on half-pay. C. C. ROUNDS said:—It was idle to talk of the profession of teaching when schools are in session three months in a year. Teachers cannot live on three-months' pay. Z. RICHARDS favored agitation and discussion.

The HON. W. H. RUFFNER was excused by request from reading the following paper on

THE MORAL ELEMENT IN PRIMARY EDUCATION.

Nearly thirty years ago an eminent English philosopher proposed to erect the laws of character into a science, and to call it Ethology. I do not know that the idea has been developed, except in the speculations of phrenologists, sociologists, and expounders of heredity. But undoubtedly we shall one day have a special science treating of the laws which regulate the formation of character. No one doubts that every man is what he is as the result of the operation of laws; and however diverse may be human characters, they have all been formed under *the same* laws. All *systematic training* of children is a recognition of this

principle. And, as DR. CHALMERS has shown in his Institutes of Theology, such statements are not invalidated by the fact that God's Spirit may be one of the factors in the operation; for that spirit uses, and does not dispense with, the laws of man's mental constitution.

It is not easy to construct this science, or it would have been done long ago; but the clue is in hand when we see that its formative principles lie in the domain of psychology, and that the work to be done is the accommodation of these principles to this special subject.

Hence the doctrines of Ethology have been recognized as "middle principles" (the *axiomata media* of Lord Bacon); principles which, as Bacon observes, constitute the chief value of every science, because in them science becomes exact and useful.

Ethology will lead us to study the origin and sources of all those qualities in human beings, whose assemblage makes up what we call character, and its object is "to determine from the general laws of mind, combined with the general position of our species in the universe, what actual or possible combinations of circumstances are capable of promoting or preventing the production of those qualities" (J. S. MILL).

Logically, the evolution of this science should precede that of sociology; because, in learning the laws under which individual character is formed, we have the master principles on which society is formed. And whilst the salient points of society tempt bold students like BUCKLE and SPENCER to plunge directly into the tangled wilderness of sociology, the cautious thinker, who measures his task before he undertakes it, will see that he who undertakes sociology, before the differentiation of Ethology, will die like BUCKLE in the wilderness, exclaiming, "My Book, my Book!"

As soon as Ethology takes the scientific form, it will be immediately used as the foundation of pædeutics, and be adopted as the cardinal branch in Normal study. In this science, and in its deduced system of education, will appear, as a prominent branch, *the Laws and Rules of Conduct;* and this is nothing more or less than *Ethics*, pure and simple. Ethics is, philosophically, a branch of Ethology, just as Ethology is a branch of Psychology. Ethics proper, does not include jurisprudence, politics, or the law of etiquette, just as Ethology does not include sociology or national character. Ethics deals only with the individual, and tells him how he ought to behave himself. So that those few school laws which remembered that there was something worth teaching besides the six primaries, and added "Good Behaviour" as a thing to be taught in the schools, really struck upon exactly the right word—*behaviour*—for requiring the teacher to put Ethics into his programme, without using an alarming word. Ethics will soon cast off those endless discussions about the Freedom of the Will and the Nature of the Moral Faculty, and hand them over to Psychology, where they properly belong. For what is the Will, but the mind determining what it will do? and what is Conscience, but the mind acting on moral subjects? Could the distinction be broadly drawn between Ethics proper and Ethical Psychology, and then could the grounds of ethical obligation be made part second in every ethical treatise, it would be found that there is something in Ethics which a boy can understand before he reaches the Senior class of a college course.

Unload Ethics of its foreign matter, and it becomes simply *Rules of Conduct.* Its elements are simpler than the four rules of Arithmetic, or rather than the two fundamental principles, adding and subtracting, out of which grow all arithmetical operations, and which become complicated only when applied to complicated problems. Such is Ethics—a few simple rules of conduct which any child can learn, but which become difficult of application when applied to complicated questions. Notorious as moral philosophers are for their debates on incidental questions, they are remarkably agreed on what constitutes the ethical code. They will debate as to *why* men ought to do right, but not as to *what is right.* And even the differences as to the ground of moral obligation seem to be nearing an adjustment.

There will always be men in every department of science who will ignore the Author of Nature, chiefly because they regard science as dealing only with second causes; and in Ethics such men are satisfied, when they find that moral actions have their roots in man's nature and relations; but the idea is gaining even with that class of thinkers, that not only is it illogical and irreverent to leave out of view the will of the Ruler of the Universe, but that as a matter of moral dynamics, stronger motives are needed than those of Egoism, Hedonism, or Utilitarianism, in order to make any of these systems operative.

But educators need not hesitate as to the propriety of appealing to the will of God as the ultimate authority in matters of conduct, although they may not always feel at liberty to determine for their pupils how that will is to be ascertained. There is perhaps no question in the moral world on which mankind are and always have been so nearly unanimous as this, viz: that God's will is absolute authority in moral matters. Deference for eccentricities of religious opinion will have become an intolerable vice when *any* school teacher hesitates to acknowledge the existence or the authority of the blessed God and Father of us all.

In the prosecution of our idea, the first work needed is the codifying of the moral doctrines of the country—and that in various forms, and with various depths of fulness, suited to schools of various grades, suited also to family use, and to the wants of the grown man who rarely passes a day in which some difficult question of morals does not arise. Touch life where you will, you touch a moral nerve; and yet often the moral principle involved is so subtle and so ramified with others that, like the aching nerve of the bodily system, you may feel the pain but cannot detect the seat of your trouble.

Ethics must begin with the "Categorical Imperatives," as KANT calls them, and follow with the simple applications thereof; and gradually advance into the region of complex and conflicting motives and principles, where the subtle vices of society reside, and are covered beneath the surface of a high respectability.

Now and then only these respectable vices bring down a fair name, and the world is astonished as it is when some well-conditioned bodily frame is suddenly prostrated by a hidden disease which had hung out no sign of its fatal mining.

All pervaded as society is by moral evils of every grade, how amazing that society should be *without a moral code*, without a statute book, without a moral Blackstone or Kent.

You are perhaps startled at this statement, but if there is one such book known to society, name it, *name it.* The Bible, you say. But is the Bible a *code?* No, no more than it is a body of divinity, or a catechism. The Bible is a collection of sacred books written by many authors, scattered along the track of fifteen centuries. It blazes with moral principles, but they are scattered like physical facts over the face of Nature. And like the scattered parts of a tangram they must be brought together before they are seen to be a symmetrical whole. Numbers too are staring us in the face always, but numbers become powerful only when made into arithmetic. There is a grammar in all human speech—there is geographic truth in every foot of the earth's surface—but before geography and grammar can be taught properly, their principles and facts must be systematized. And so, abundant as are the materials of ethics, we need the *systematic moral code* as the instrument of effective moral teaching.

The services of the Church in this direction are not forgotten or undervalued. To her society is chiefly indebted for its general moral soundness and growth. But the teaching of casuistry is only incidental to the mission of the Church, which is to fill men with the powers of the world to come. A pure life on earth is of course required, and the broad principles by which that life is to be regulated are announced and insisted upon; but the carrying of ethical principles into the minutiæ of life was not only not enjoined upon the Church, but the example of Christ and his apostles shows that the Church was expected to avoid that very thing. It was thus only that the Church could become cosmopolitan—thus only that she could win all men to Christ, and save herself from endless persecution. And such was her modest practice until she allied herself with the State, and assumed a sort of universal directorship in regard to human affairs, for which she had no commission from her Lord and Master. And the whole of Christendom to-day suffers in many ways from the effects of this union of Church and State—and one of the evils is just this which we are considering. The Church having in past ages undertaken to be the casuistical monopolist of the world, society has been left without a moral code. Morality and religion have points of close contact, but they are as different as terrestrial gravitation from solar attraction. The one is terrestrial, the other is celestial; and the glory of the terrestrial is one, but the glory of the celestial is another. The Church has nobler work than to be discussing the rate of interest a man may get for his money. The Church may say—ought to say with the voice of an angel—be honest, and truthful, and pure, and gentle—but she cannot follow those grand principles into their ramifications. If she does she will weaken her hold upon men—she will obscure the awful light of eternity. Moreover, she will blunder and often make herself ridiculous, as did Pope Calixtus III. when he solemnly issued his bulls against the comet, as she has many times done when dabbling in things *not written.* As long as she has a "Thus saith

the Lord" at her back, men will bow in reverence, but when she comes down to little criticisms and casuistries about which there is no "Thus saith the Lord," and there is room for differences of opinion, she soils her skirts, and sacrifices her *prestige*.

Let the Church give men right principles, and let the schools systematize them, and develop for themselves and for society those details which shall inform and guide men in their daily life and be made a part of the scheme under which the young are educated.

It is not forgotten that much is wanted in moral training besides a text-book—a good mother, a good pastor, a good teacher, a good discipline, favoring circumstances, "line upon line, precept upon precept, here a little and there a little," and all that. Moreover, mental training is moral training to a certain extent; and the failure to recognize this has occasioned much needless concern among good people, especially in reference to public schools. Though there may be no *special* moral or religious training, the ordinary exercises of a well-conducted school are highly ethical in their influence. And when the teacher is high-toned, his personal influence is elevating upon his pupils. And there is a great deal of miscellaneous moral instruction given in every school as well as in every good home. It is only proposed in this paper to do *systematically* what is now done unsystematically, and hence incompletely; to accept ethics *as a study*. It is claimed that the subject is at least as important and susceptible of school-room treatment as geography or arithmetic. And that, for the same reason that a child ought not to be left to pick up his arithmetic as he may, he ought not to be left to pick up his morals as he may. It is, of course, desirable that parents should look after their children's improvement, both morally and intellectually, but parents may be incompetent or neglectful. Moreover, the idea of education is, that all its teachings shall be systematic; that it shall include the whole nature, moral, physical, and intellectual; and that it shall leave nothing to chance. If the teacher is expected to turn out an ethical character, he must have the ethical feature in his programme. He is not to be satisfied with incidental effects and incomplete results, or with occasional efforts. Children must understand that they are expected to behave themselves, not simply that they may not plague the master and disturb the school, but because behaviour is the *great thing* of all the things they have to learn; that morals are not subsidary to scholarship, but the reverse; that what a boy learns is not as important as what he does; and that, at the outcome of his school life, what he *knows* is not as important as what he *is;* that what he can do is of small consequence compared with what he is inclined to do and what he does.

The details of this moral work on the pupil are for consideration and experiment. As to the systematically-didactic part it should be both oral and textual. With advancing maturity the simplicities of elementary teachings may properly pass into the more complex conditions of life, where sound principles conflict with each other, and difficult problems beset every pathway. To a child nothing is more mysterious than the moral complications of life—nothing more impossible than the

straightforward use of the moral maxims which he has learned. The application of plain principles to actual life, Aristotle considered the most bewildering puzzle of human existence. He regarded practical virtue as the nice adjustment of a hundred forces. He saw that human association would be an impossibility, if every good principle was to be run like a red-hot ploughshare through the tangled vines of social life; but a man must get along like a skirmisher feeling an enemy, by glancing warily to the right and the left before advancing. Nothing is good, exclaimed Aristotle; everything depends on the way you use it. The wise man will "sound his dim and perilous way" through life. A right principle is, of course, not to be sacrificed; but when it conflicts with the demands of other right principles, then comes the trouble.

When you exhort a child to "speak the truth always," how is he to know that you do not mean that he shall give every one "a bit of his mind"—or that private matters are not to be blabbed—or that whatever he knows about people is to be spouted over the neighborhood? Or if you caution him against a deluge of truth, shall he dry up entirely? How is he to know what to tell and what to refuse to tell; when to speak and when to be silent? And what about evasions and flattering speeches, and all the strategies of society—and of war, too, if you choose? Was John Champe right when he went after Benedict Arnold and told one thousand lies to get him? If not, what shall we say of General Washington "who never told a lie," and Harry Lee, "the soul of honor"—who sent him to the British to tell all those lies?

You say that was war. All life is war. Emerson says, "Regard your best friend as a beautiful enemy." We are always hiding spies under the flax. What does Paul mean when he says he becomes all things to all men? Is it right for *you* to flatter a popular prejudice which in your heart you despise?

These are every-day questions, and a sad part of a child's actual social education is to teach him to conceal the truth and to impose on others by false pretenses. Old Tom Carlyle need not have made himself so unhappy about social shams; but the most of what he says is true. These examples are mentioned not to apologize for social shams, or to indicate any opinion in regard to them, but only to illustrate the difficulties of both children and grown people in applying plain cardinal principles of morality.

The field of American politics is our greatest moral chaos, because it is comparatively a new branch of human experience, and one offering a greater variety of strong temptations than any department of old-world society. The average American needs far more moral training than the average European. The very features in our American life which most powerfully develop the individual, and give prosperity and power to the nation, are like the great motive powers—fullest of danger. Our business life is miscellaneous and unsettled, especially in the younger States, where new things and new questions arise hourly; and our whole civil life is raw and exposed, and endlessly complicated, and largely without precedents. Railroads and copper mines are new elements in politics—and Satan never wears more angelic garbs than when he approaches a

public officer with a *placebo.* If it were possible, he might deceive even the elect. And if the great and mighty are deceived, who can wonder if the clodhopper should see no harm in selling his vote if it pays better than suckering tobacco from sun to sun in the hot days of summer? He may not know whether it is best for the country for John Doe or Richard Roe to go to the Legislature, but he knows that a little money is a good thing to have, and that a new hat is better than an old one, and if he works for farmer Smith's 50 cents a day, why shouldn't he work for John Doe's $5 a day, with whiskey thrown in? Doesn't Dr. Esculapius sell his time? Doesn't Lawyer Campbell sell himself for money to any horse-thief that wants to get justice cheated? Then "why may I not take money, yes, and work, and use money to elect John Doe?"

The packing of conventions, the carrying of elections, the putting through of corporation measures, are among the mysteries of society. The sharpest investigating committees, the keenest detectives, are often balked in their efforts to find the centre of the plot; and yet many good men are misled by specious pretences, even when not carried to the point of corruption; whilst others find themselves almost unwittingly involved in transactions which a clear moral insight would have led them to reject with scorn. Mr. Jefferson said, that even in his day rogues had a wonderful facility for getting into office: for, in the first place, they stole the hearts of the people in order to get into office; and then, after getting in, went to stealing in other ways.

The explanation of the whole thing is found in *the moral obtusity of the people* at large. It is said that the TICHBORNE claimant in England is regarded by the common people simply as a gentleman kept out of his rights. If a public man is convicted of at least questionable moral conduct, he still has the chance of an ovation from his constituents. The moral perspicacity of the masses must be quickened before we can be sure of having pure officers. They must not require a candidate for their suffrages to blunt the edge of his moral nature in order to secure his own election, and then expect stern virtue from him after he gets into office. They must not only require purity, but they must know what purity is; they must know how to apply moral principles to acts in all situations. And they can learn this only in the primary schools; for the masses never get beyond the primaries. It is hard to believe, without examination, that the education of the primary school alone can do much to elevate the people intellectually or morally; but the student of history knows that the primary school has powerfully modified the characters of many nations; and its future is to be far greater than its past. The masses will certainly be made *smart;* but if they are to be made virtuous as well as smart, they must be at least as quick to solve a moral as an arithmetical problem. The masses of men are honest in intention; the danger lies in their obtusity. When villainy is clearly shown to them, they put it down; and it is owing to this bottom honesty in the people, that when our political must is set to fermenting, it works itself clear for a while. But these cycles of fraud are costly and dangerous. We love self-respect and the respect of the world; and our grand edifice of popular government is shaken to its foundations.

My purpose in this address has led me to speak more of primary than of other schools; but as already intimated, moral doctrines being simple in their elements, and progressively complex and difficult, they have a phase suited to every grade of school, even to the highest university; and as in general scholarship the lower schools are largely affected by the upper, so will it be in the teaching of Ethics. And when through all the grades of education the work upon *character* becomes as systematic and thorough as the work upon intellect, it may fairly be expected that the material magnificence of the present will be far surpassed by the *moral glory* of the future.

The President introduced DR. DA MOTTA, Centennial Commissioner of Education from Brazil, who spoke as follows:

EDUCATION IN BRAZIL.

The most striking feature of the present century is the interest which all nations are taking in education, feeling assured that it will bring happiness and prosperity to the people. The victories gained by Prussia over France were not through her improved arms, but her system of schools. In Brazil the primary schools are under the control of the State and provinces—not divided as here into township or district organizations. The higher schools in the Capital are under the control of the General Government, and the success which attends the schools in the cities is due to the care which the Government takes of the teachers and to the system of compulsory education. The State looks upon its teachers as the most useful members of the community. The greatness of the future generations depends upon them, and their success is guaranteed. They are paid high salaries, which increase according to merit and length of service, and the profession of a school teacher is one of the most promising in Brazil. Education (primary) is compulsory and free. In the cities each parent is required either to send his children to school or to show that, when at a certain age, they understand the elements of primary education. In many remote parts of the empire this system could not be properly enforced, but in many of those places private schools have grown up, and the proportion of illiterate children is gradually decreasing. To be admitted to higher schools, candidates must pass an examination in their knowledge of the national language, English, French, Latin, Greek, rhetoric, mathematics, philosophy, and natural science. In the higher schools medicine, law, civil and mining engineering, and mathematics are taught. Before a student can graduate as a physician, he must have studied the science of medicine, both theoretical and practical, for six years, and the student of law for five years. Within that time he must have made himself conversant with natural law, public law, international, civil, and common law, and must also have practiced with some eminent lawyer for a term of two years.

In the primary and second grades religious instruction is compulsory. The Catholic religion being the religion of the State, its catechism is

taught in schools, but as other creeds are not only tolerated in, but welcomed to the empire, the children of parents who profess a different faith are relieved from attending to those religious exercises. There are also commercial institutions and military and naval academies, in which are taught the elementary branches of mathematics and other sciences, as well as practical lessons given in military matters. The people of Brazil are trying to follow in the steps of other nations more ancient and enlightened, and attempting to continue in this progressive way by studying the best improvements and the best methods of American educational institutions.

The President then introduced DR. MEJERBERG, of Sweden, Centennial Commissioner of Education from Stockholm, and Superintendent of the Schools of that city.

He traced the progress of liberalism in Sweden from the fifteenth century, when Protestantism was introduced into the country, successively through the reigns of GUSTAVUS WASSER, GUSTAVUS ADOLPHUS, and CHARLES XII. In the reign of the latter compulsory education was introduced, and a school was established in each parish, with a board of instruction, of which a clergyman was president. They did not consider geography a necessary study except to learn the way to America. About twelve years ago the Government began to control the erection of school buildings and thus corrected the evils resulting from inferior building. Lately Normal Schools have been established. At first there was much opposition to Superintendents of schools, but the people now consider them their best friends. Teachers in Sweden are a most independent class; their tenure of office is for life, and they cannot be removed except after a thorough trial. If this were not so they could not succeed in obtaining good teachers, because competent men and women in Sweden will not accept positions unless they are sure of retaining them. Gymnastics is included in the school studies. Religious instruction is compulsory, but all denominations have equal freedom; the Government is trying to educate the people in every respect up to the standard of American institutions.

He closed by inviting the American teachers to be present next summer at a convention of Scandinavian teachers to be held in Copenhagen.

The President announced the following committees:—on Necrology, Z. RICHARDS, Washington, D. C., W. E. CROSBY, Iowa, J. M. B. SILL, Michigan; on Resolutions, E. E. WHITE, Ind., W. H. RUFFNER, Virginia, W. T. LUCKEY, California, WARREN JOHNSON, Maine. The places of meeting of the committees and departments were announced by the President. The President read a communication from the State Teachers' Association of Arkansas, accrediting G. W. HILL as a delegate to this association. PROF. BROOKS offered a resolution of thanks to DR. DA MOTTA, of Brazil, and DR. MEJERBERG, of Sweden, which was unanimously adopted.

Adjourned to meet at 8 o'clock, P. M.

EVENING SESSION,

Association met at 8 o'clock, President PHELPS in the chair.

DR. HENDERSON, of Kentucky, gave notice that he would offer an amendment to the constitution at the next session. MR. WHITE, from the committee on the endowment fund, made the following report:

The committee to whom was referred that portion of the President's address relating to an endowment fund for the Association, report that before such fund can be properly received and invested, certain modifications to the constitution become necessary. They therefore propose the following amendments: 1st. To change Section 3 of Art. III, by erasing the word *ten* and substituting therefore the word *twenty*. 2d. Add to section 1 of Article IV, the following:—Any friend of education may become a life-director by the donation of one hundred dollars to the Association at one time either by himself or in his behalf. 3rd. Insert after the word counsellors in Art. 2, of Section IV, the word *Life-Directors*. 4th. Insert before the word officers in Sect. 3 of Art. IV, the word *elective*. 5th. Add a new section, to be known as Section 9 to Article IV; such Section shall read as follows: The Board of Directors shall appoint three trustees into whose hands shall be placed for safe keeping and investment, all funds which the Association may receive, from the creation of life-directorships or from donations, unless the donors shall specify other purposes for which they may be used. The income of such funds so invested shall be used exclusively in drefaying the expense of publishing the annual volume of the Association unless the donors shall specify otherwise. The Board of Directors shall require such trustees to give to the Association their joint bond in a sum equal to twice the amount of such trust fund, as may be in their hands.

The committee recommend that the Board of Directors be instructed to secure articles of incorporation for the Association; also that for the purpose of raising means to cancel the indebtedness of the Association, and, if possible, to publish the volume of proceedings for the present year, the Board of Directors be authorized to use all moneys now on hand or received from the sale of volumes, or from annual memberships or life-memberships at this time. That members are urged to make themselves life-members.

That all friends of education be invited to contribute funds for that especial purpose. Respectfully presented.

S. H. WHITE, Chairman.

The Report was adopted unanimously, and it was suggested by Z. RICHARDS that the Association be incorporated at Washington, the Capital of the nation.

The President introduced DR. EDWARDS, of Illinois, who addressed the association on

THE NORMAL SCHOOLS OF THE UNITED STATES;—THEIR PAST, PRESENT, AND FUTURE.

In the American Cyclopædia, Vol. XII, it is stated that the first suggestion for the establishment of normal schools in the United States was

made by DENISON OLMSTED in an oration delivered in New Haven in 1816. But the actualizing of this idea must be accredited to Massachusetts as a State; and there is little doubt that of all the men engaged in starting the enterprise HORACE MANN was the most influential and effective. The proposition to establish teachers' seminaries was by no means well received even among educated men. By many it was regarded as chimerical; by many it was looked upon as a measure that would be injurious to existing institutions,—academies and colleges. The idea that a professional preparation for teachers is necessary or useful, seemed to many untenable, the assumption being that the only thing that need to be taught to a candidate for pedagogic honors, is the knowledge which he will be called on to impart. But in Massachusetts, the advocates of the new idea were in grim earnest. HORACE MANN engaged in the work with his customary zeal. He brought to the discussion the energy of an intense conviction, the power of a wonderful magnetism, and the resources of fine natural abilities, high culture, and an indomitable and all-devouring industry. The first result was a proposition from Mr. EDMUND DWIGHT, an educated, wealthy, and benevolent Boston merchant, to contribute ten thousand dollars for the establishment of a number of normal schools, provided an equal sum should be appropriated by the State. The proposition was made by Mr. DWIGHT, on the tenth day of March, 1838, and conveyed to the legislature by Mr. MANN on the thirteenth. It was at once accepted by that body. The money, $20,000, was put into the hands of the Board of Education, which had been organized for about a year, and of which Mr. DWIGHT was a member, and Mr. MANN was the secretary, and active officer. By the Board it was decided to open three institutions, to be kept in operation for three years, which would give each of them the ninth part of $20,000 for each year. The first school was established in Lexington, making its first little fight on the spot on which the nation, sixty-four years before, had fought its first little round. It went into operation July 3, 1839. Its principal was CYRUS PEIRCE. Its opening was well advertised, but for some reason delayed from the time first fixed upon. "The day opened with one of the most copious rains of that rainy season." All needed preparation had, however been made. The dignitaries were present, that is to say, the new principal and the secretary. They were met by three candidates for admission,—one and a half to each examiner. In fact the announcement of the opening of the first American Normal School fell still-born upon the apathetic public of Boston and vicinity. The eloquent secretary had urged the importance of the enterprise in many lectures before numerous conventions. The Board of Education had striven, officially and personally, to awaken an interest therein. Certain persons, eminent for learning and piety, among them Dr. WILLIAM ELLERY CHANNING, felt anxious for its success. But the mass of citizens, learned and unlearned, rich and poor, wise and otherwise, evidently "cared for none of these things." The Board, however, and especially the indomitable secretary, persevered. Another school was established at Barré, and went into operation on the 5th of September, in the same year. Here appeared twelve young ladies and eight young gentlemen, and the secretary in his

diary, exults at the prospect of thirty before the end of the month. On the 9th day of September, 1840, in the midst of the hard-cider political campaign, was launched, at Bridgewater, the third of the projected schools. The number admitted as students was twenty-eight.

Here occurred a stay of proceedings. The educational energy of the American continent was exhausted, so far as the fitting up of teachers' seminaries was the expression of it, by the expenditure of this $20,000, one-half of which had been furnished by a private gentleman. Indeed, the great strain upon that energy had been so exhaustive that in the Massachusetts legislature of 1840, there was a serious relapse. A proposition was made in that body to abolish the board of education, and it was urged with a resolute pertinacity. But friends appeared, almost unexpectedly, and the board was sustained by a good majority. In 1842, an appropriation of $6,000 per annum, for three years was made, for the support of the three schools, giving each of them $2,000 per year. And the secretary rejoices thereat in the following words: "Language cannot express the joy that pervades my soul at this vast accession of power to that machinery which is to carry the cause of education forward not only more rapidly than it has ever moved, but to places which it has never yet reached." And in the spirit of true prophesying he adds: "This will cause an ever-widening circle to spread amongst contemporaries, and will project influences into the future to distances which no calculations can follow."

This was the beginning of Normal Schools in the United States. At first the increase in their number was very slow. In 1843 that at Albany, N. Y., was established. In 1846 there was an addition of one, in 1850 of one, in 1852 of two, in 1854 of two, in 1855 of three, in 1856 of two, in 1857 of two, in 1859 of one, in 1861 of three, in 1862 of two, in 1864 of four, in 1865 of three, in 1866 of nine, in 1867 of thirteen, in 1868 of fourteen, in 1869 of six, in 1870 of twelve, in 1871 of thirteen, in 1872 of eight, in 1873 of ten, in 1874 of four. The two years, 1875–6, I am not prepared to report. It is interesting to notice in connection with this table how educational enterprises are affected by financial circumstances. After the crash of 1857, there was a palpable diminution in the ratio of increase. In 1858 no new schools were organized, and in 1859 but one against the two and three of previous years. On the return of prosperity an added increase is noticed, which in 1868 culminates in the establishment of fourteen new schools. Since 1873 there is apparent again a marked falling off. And we have every reason to believe that with the revival of prosperity the number of schools for training teachers will once more increase in a ratio more than commensurate with the increase of population.

We have noted the number of students with which the normal schools of Massachusetts began. I am not prepared to state the numbers in attendance at each of the years from that time until now. But, by the help of the Reports of the National Commissioner of Education, Gen. EATON, I am enabled to give these and other facts approximately for the five years, 1870 to 1874 inclusive. And the exhibit is very instructive and encouraging, as set forth in the following

TABLE:

YEAR.	No. of Schools in U. S.	No. of Instructors.	No. of Pupils.	Failed to Report Instructors.	Failed to Report Pupils.
1870	75	178	9728	43	45
1871	114	445	10965	50	45
1872	103	799	11876	9	8
1873	119	877	16621	9	11
1874	134	966	24405	14	12

Of the one hundred and thirty-four schools reported in 1874, sixty-seven receive appropriations from States, four from counties, and nine from cities. The remaining fifty-four have either failed to report or are supported by private endowment, or by tuition fees.

These figures indicate a wonderful progress in the public sentiment of the country on the subject of Normal Schools. In thirty-five years the number of pupils in attendance has increased from the three that greeted Father PEIRCE on that morning of July 3d, 1839, to 24,405. I suppose we have here what is known as a fact,—a thing to reason from, a thing to account for, a thing to respect. In our discussions this fact must be admitted. It cannot be argued out of sight. In some way it must be conceded, the normal school has commended itself to the good opinions of the American people. And this commendation has not been a spasm. It has grown and strengthened. At first the growth was slow. It took many years of hard, earnest work to overcome the inertia of the public sentiment,—the latent disinclination of the people to favor changes.

This spirit of conservatism is often strong, but in this case it was unusually so. The mass of the people were quite out of sympathy with the new idea. How then shall we explain the great change that has taken place in the public sentiment of the country concerning normal schools?

1. It is due first to the reasonableness of the normal idea,—the idea that teachers, like the members of other professions, need a specific training. On philosophical grounds nothing can be more successfully defended. It accords with what we claim for the worth of mind, and the consequent dignity and importance of the business of educating it. A carpenter who works on dead matter only needs an apprenticeship. Shall he who works on the noblest thing in any degree under our control rush upon his task with no preparation? This argument has never been really rebutted. Lectures have been written, and speeches made against it, but its force has never been broken. The common sense of mankind has accepted it as reasonable and philosophical.

2. Another contributing cause to the same result is the superior success as teachers of the graduates and pupils of these schools. In spite of many failures, in spite of much conceit and vealiness, in spite of a premature display of crude and undigested methods, in spite of noisy zeal that is not according to knowledge, in spite of a confident certainty of expression about things at best but half known; in spite of these and many other short-comings, it has nevertheless been true that the young men and women, educated, or partly educated at our normal schools, have on the whole proved themselves more efficient as instructors of the young than the average of their

compeers. There are many communities to my personal knowledge in the State of Illinois especially, in which the public sentiment demands the employment of normal teachers, so called, and will be content with no other. It is easy to form guesses as to what the public sentiment of the country is on any question at any time, but it is the right of any man to form such a guess. And for one, I feel warranted in saying that in that part of the country known to me, I believe that on a popular vote, the normal school would be well sustained.

3. A third reason for this modification of the public sentiment is that the normal school has been a potent factor in our educational progress. The American people have a thorough and permanent faith in the grand enterprise of education. Whatever improves the systems or methods thereof, they are ready to approve. And they have noticed that the era of improvement has been contemporaneous with the active life of the normal schools. They have noticed that the progress of improvement in the philosophy and methods of education seems to have been from below upwards, and not from above downwards. By the influence largely of normal schools, the common schools came to feel the need of improvement before that need was felt to any great extent in the colleges. At least, such appears to be the generally-entertained opinion. The normal schools therefore get large credit for active agency in this progress, which it is believed the nation has been making, and they are sustained and honored accordingly.

4. Again, the normal school has commanded public approval and secured the public confidence, by conforming itself to the evident needs of the people. It has looked forth upon these communities, and noting what work was most neglected, and therefore most needed to be done, it has applied itself to that work. It has not confined itself to mere theoretic, professional instruction. It found thousands of teachers at work who were not qualified in the subject-matter of school instruction, who were ignorant of the arithmetic and English grammar, and geography, which they were daily attempting to teach. And it undertook among other things to make up their deficiency. With something of professional, it has done a vast amount of academic work. This has not been the characteristic of all the schools reported to the United States Commissioner. Some of them have confined themselves quite rigorously to the professional work, and to such other matters as were very necessary for illustrating that work. But of the mass of them this has not been true. They have done, largely, whatever their hands have found to do. And they have found much to do that to many has seemed greatly out of place within their walls. But whether philosophical or not, this readiness of the normal school to take on mixed work, has made it acceptable to the people, and for the time being at least has extended its influence. Whatever of influence the average normal school possesses, it has attained by work of this kind. Its laurels have all been won in this field.

There are some things in the present status of the normal school in the United States that render it difficult to make general statements. One of these circumstances is the great diversity in their character, and in the quality of the work which they do. The name "normal school" is applied to a great variety of institutions. Between the staid, solid,

well-established institution, abundantly supported by State or city, well housed, well furnished with books and apparatus, managed and taught by men and women of large culture and long experience, between these schools and others just pushing themselves into uncertain being, cramped for house room and yet more cramped in appliances,—there is a wide difference. And yet in the Commissioner's Report, they all rank as normal schools. And by the genius of our institutions their claims must be allowed. We can have no national system of normal schools as things now are. These schools must be created by authority of the different States. Whatever the State legislatures make them, that they are. A new State, struggling with the problem of taming the wilderness, might be expected in the beginning of its career, to set up only an incomplete equipment for a teachers' seminary. But of these slight beginnings great results often come. Indeed some of the new States, by reason of their freedom from the trammels of old nations, have exhibited a wiser generosity in this respect than States that are more under the rule of precedents. But leaving out of view the schools established by public authority, and supported by public funds, we find many private establishments, which are in all respects a law unto themselves, except as they are influenced by the public sentiment about them. Among these there is certainly much diversity. They are not subject necessarily to any visitation, nor amenable to any public control. But like all other institutions of learning, they are subject to the judgment of the community at large. If their work is ill done, or superficial, the fact is likely to become known, and their standing is at last determined with a reasonable degree of justice. At last! Sometimes the weeding process is slow.

Concerning the work actually done in these institutions in the different States, it appears from the report for 1874 that in 94 of them drawing is taught, 42 have casts and models for drawing, 107 teach vocal music, 62 instrumental music, 107 have chemical laboratories, 82 have cabinets of philosophical apparatus, 65 have museums of natural history, 23 have gymnasiums, and 73 have model schools.

The usual course of the normal school occupies from two to four years of time, the difference depending upon the amount of work aimed at. The two-years' course is for those who expect to be employed in country districts or in subordinate capacities in the schools of cities. The three-years' course includes some knowledge of the natural sciences and the higher mathematics. In the four-years' course is usually included enough of the Latin and Greek Languages to secure admission into the best colleges, besides something of an acquaintance with German or French or both. Almost every school gives a review of the common branches, and some of them do this work most thoroughly and usefully. On this part of the work have many of them secured their reputations,—reputations not of dazzling brightness, but solid and honest.

In the way of professional work, so called, every school does something. In many, books are taken for guides, as in any ordinary study. In others the subjects of school organization, the philosophy of education, practical didactics, etc., are presented orally, in lectures. Practical teach-

ing in the model school under supervision is an important exercise in the 73 cases in which the model school is found. Observation of the teaching of others, accompanied by a written report thereof, is a very common form of exercise. In the institutions known as training schools, this practical work in all its phases is carried out much more fully than in the ordinary normal school. More effort is put forth to secure in the student's mind a mastery of educational principles. More continuous and thorough practice, under intelligent supervision, is insisted upon, and as a consequence, more dexterity and practical skill in the work of teaching is imparted to them. I am not aware that the kindergarten has been connected directly with any normal school.

The normal school has on the whole attained a noble success in the United States. To use a less forcible expression for this fact would be an excessive affectation of a misplaced moderation. Some of the evidences of this success have been indicated. They are found in the multiplication of the schools, in the demand for the services of the teachers educated in them. They are also found in the introduction of normal departments into colleges, academies, and seminaries. They are found in the confidence with which the public regard the schools generally. They are found in the genuine and substantial progress in education which they have done so much to promote. To ignore this great fact, much more to deny it, would be not only unpolitic but unjust.

But the normal school has made its mistakes. That result was inevitable. Such a vast increase of power and public support might well be expected to turn the heads of its friends. The name came to be a mighty one to conjure with. And it has been used in recommendation of methods and enterprises that have no merit of their own. In this name the most absurd and unreasonable promises have been put forth, the most astounding philosophy has been taught. There have been loud boasting and very loud advertising, to "split the ears of the groundlings." But it hath only "made the judicious grieve." Mistakes have also been made by the enthusiastic and inexperienced of the pupils, who have "rushed in where angels fear to tread," and have thought themselves possessed of knowledge or power that real life has largely discounted. There has been crudeness, and in some cases superficiality. But with men and women in earnest, willing to work, willing to be taught, these are evils that time always cures, and do not therefore call for much in the way of animadversion. The fine enthusiasm generated in the normal school, although it may not always be accurate in discriminating, is nevertheless an invaluable attribute, and far be the day that cools its fervor.

So much for the past and the present. What of the future? What sort of institution is the coming normal school to be? What sort of thing ought it to be? I am painfully conscious of inability to answer the latter question, to say nothing of the former. Who can tell precisely what the normal school of the future ought to be? Who, in 1776 could have dictated wisely and well the best type of such an institution for the last quarter of our nation's first century? Shall we have only professional instruction in the good time coming? Will the normal professor find his pupils thoroughly conversant with the positive knowledge they

need, and will it be his blessed function only to discuss ways of arousing attention, awakening motives, adjusting this well-mastered knowledge in such way as to make it productive in the teacher's hands, and germinative in the pupil's mind? For the immediate future there is a way worthy, it would seem, of trial. It is the faithful doing of what the hour seems to demand. Let the normal school as it now is be conscientiously utilized. Let the teaching of science or literature, or what not, be done with a careful heed to the wants of the minds taught. Let a careful induction be made of all the phases presented by the work. Let the facts thus learned be compared. Let the results be expressed in general statements. Let these statements be laid aside, not published while they are green, and let them be fairly tested time and again. And when the hair is gray, and the sounds of the pedagogic battle have died away in the distance, in the mental repose of mature age, let such of the "principles" as have stood the repeated ordeals be laid before an anxious world. And unless the man who has come to exactly the opposite conclusion from you after similar waiting and labors, should get the public ear, you may stand some chance of being quoted as an educational authority. In other words, let us be slow in rushing into generalities. Let us have a serene, abiding faith in patient work, in candor, in the beneficent influence of time, and in human progress. For myself I have the fullest faith in the future of the normal school. I believe it will continue to improve from year to year and from decade to decade. I believe that a time is coming when it will be stripped of its inconsistencies, and will nobly illustrate the grand effect of the growth of ideas among a free people. As yet we have not fully lived out the ideal of the true normal school. For the attributes of this institution, like the scenes of a great epic, cannot be written out until the soul has passed through the requisite experiences. And for a result like this, the experience of no single man will suffice. The nation itself must pass through it. One day there will be gathered in the ripened fruit of all this labor and thought, and we shall have a normal school worthy of this great republic, for it will be the product of the life of the republic.

I know that many important questions must be decided in the course of this progress, and that the discussion of these is entirely appropriate to this Convention. But that discussion cannot be entered upon in a paper so short as this ought to be. And it is therefore intentionally left to the gentlemen who will offer remarks in connection with this topic.

But I cannot close, Mr. President, without asking your indulgence in a word or two upon the character of the early laborers in this normal-school field. In our devotion to institutions, we sometimes forget the power of personal character and influence. I believe there has gone with this enterprise of training teachers from year to year, down the decades, something of the spirit of the men who launched it. Some of those men we know well. Their names live in the literature of the country. They are the men who wrote reports, addressed conventions, appeared before legislatures, and were before the world the representatives of the normal schools.

But there was another group, whose memory we ought not to let die.

I mean the men who actually did the work. I mean the men, among others, who in Massachusetts undertook on a small pittance of money, and in buildings most unfit, to make the normal schools models of excellence. I mean the men who under circumstances so unfavorable, undertook to achieve a success so wonderful as to convert a generation of unbelievers in the enterprise into ardent supporters thereof. Undertook, did I say? They did it! Finding the material resources so deficient, they resolved that they would throw into the work all the more of high mental and moral force,—all the more man.

These normal schools were brought into being by men of power, and of culture. Fine abilities, thorough and extended scholarship, indomitable industry, a glowing enthusiasm, and an unruffled moral courage—these were the qualities that gave the movement success. Some of these men, though possessing many elements of greatness, are at present little known by their names. But they are known by the fruits of their deeds. They were content to labor and left the talking to others. Among these are NICHOLAS TILLINGHAST, of Bridgewater, Mass., CYRUS PEIRCE, of West Newton, in the same State, and DAVID P. PAGE, of Albany, N. Y. These were men of no ordinary mould. They belonged to no rings. They were condidates for no office. Of scheming and worldly policy they knew absolutely nothing. They worked for a high end only. They were men of inexorable truthfulness, too. Hard workers they were. Indeed, their industry was excessive. But their position seemed to demand more work than men ought to do. In their day the normal school was an experiment, and an experiment conducted under very unfavorable circumstances. Funds for it were very meagerly doled out. Tradition was against it. Many cultivated men were hostile to it. It was an innovation—the introduction of a new agency into the educational field—and the graduates of colleges, for the most part, saw no necessity for any such new agency. The battle was a severe one. At the start the odds were terribly against the two or three normal schools then in the country. But these men wrought as if for dear life. And it was for life—for the life of the idea of normal training. Everybody knows the result, though few know the cost, in labor, of the victory that has been won. Nor must we forget the character of that labor. It was not such work as politicians do. It was not the nature of button-holing or "wielding influence," or bringing "forces to bear" upon men. Nothing of this. It was work in the study and in the schoolroom. It was unwearied labor to make the Normal School worthy. There was no effort at show. In the classes of these men there was little to dazzle or impress a committee of legislators. But all was thorough. All was painstaking, all was upon honor.

Of course the result was that the normal school became a permanent thing. When men put their lives thus into any worthy enterprise, there is the best reason to hope for success. These men have passed away. But their work remains with us. And the 24,000 students of normal schools in the United States constitute a monument to their heroism grander even than the noble cathedral that reminds men of the genius of Wren.

The Association received an invitation from the teachers of Baltimore tendering a boat ride to Fair Haven. On motion of W. A. BELL the Association unanimously accepted the invitation.

The chairman of the committee on nominations, D. B. HAGAR reported the following list of officers:

PRESIDENT.

M. A. NEWELL, Baltimore, Md.

VICE-PRESIDENTS.

JOHN HANCOCK, Dayton, O.
C. C. ROUNDS, Farmington, Me.
EDWARD BROOKS, Millersville, Pa.
E. S. JOYNES, Nashville, Tenn.
N. A. CALKINS, New York, N. Y.
J. W. DICKINSON, Westfield, Mass.
W. H. RUFFNER, Richmond, Va.
W. T. LUCKEY, San Jose, Cal.
J. H. SMART, Indianapolis, Ind.
W. E. CROSBY, Davenport, Iowa.
JAMES S. ROLLINS, Columbia, Mo.
J. S. MCGHEE, Peirce City, Miss.

SECRETARY.

W. D. HENKLE, Salem, Ohio.

TREASURER.

J. ORMOND WILSON, Washington, D. C.

COUNSELLORS.

WARREN JOHNSON, Augusta, Me.
A. P. MARBLE, Worcester, Mass.
MRS. M. A. STONE, New Milford, Ct.
JAMES H. HOOSE, Cortland, N. Y.
RANDAL SPALDNIG, New Jersey.
J. P. WICKERSHAM, Harrisburgh, Pa.
J. M. GARNETT, Annapolis, Md.
F. P. DUNNINGTON, Charlotteville, Va.
T. M. MARSHALL, Glenville, W. Va.
J. R. BLAKE, Davidson, N. C.
E. M. PENDLETON, Athens, Ga.
JAMES G. CLARK, Liberty, Miss.
JAMES R. MALONE, Dallas, Tex.
G. W. HILL, Little Rock, Ark.
H. A. M. HENDERSON, Frankfort, Ky.
J. BALDWIN, Kirksville, Mo.
E. T. TAPPAN, Gambier, O.
W. A. BELL, Indianapolis, Ind.
S. H. WHITE, Peoria, Ill.
EDWARD OLNEY, Ann Arbor, Mich.
W. C. SAWYER, Appleton, Wis.
A. ABERNETHY, Iowa.
C. Y. LACY, Minneapolis, Minn.
S. R. THOMPSON, Peru, Neb.
J. C. DENNETT, Central City, Col.
MRS. E. S. CARR, San Francisco, Cal.
O. H. RIGGS, Salt Lake City, Utah.
M. H. SHANNON, Jefferson City, Ariz.

COUNSELLORS AT LARGE.

WM. F. PHELPS, Winona, Minn.
JOHN EATON, Washington, D. C.

On motion, the report of the committee on nominations was accepted. A motion to adjourn was withdrawn to allow Major JAMES S. ROLLINS of Missouri to address the Association.

Adjourned to meet at 9 o'clock, Wednesday, A. M.

WEDNESDAY MORNING, JULY 12th, 1876.

The Association met at 9 o'clock, President PHELPS in the chair. The meeting was opened with prayer.

The President announced that the time had arrived for miscellaneous and unfinished business. On motion of J. BALDWIN, of Missouri, the following committee on teachers was appointed: J. BALDWIN, Mo., Z. RICHARDS, D. C., J. B. MALLON, Ga., W. E. CROSBY, Iowa, C. C. ROUNDS, Me.

On motion of Dr. C. K. NELSON, of St. John's College, Annapolis, the following resolution was adopted.

Resolved, That a Committee of seven members of the National Teachers' Association be appointed by the President to proceed at once to Washington, and to use their best endeavors in behalf of the National Bureau of Education which is now under consideration by Committees of both Houses of the Congress of the United States.

DR. SHIRAS argued at length the necessity for the action implied in the above resolution.

DR. HENDERSON, of Kentucky, called up his amendment for the abolition of the sections and the transaction of all business in general session. Mr. HENDERSON spoke at length in support of his amendment.

DR. TAPPAN, of Ohio, spoke against the amendment and moved that it be laid on the table. Carried.

MAJOR ROLLINS, of Missouri, offered the following resolutions concerning public lands:

Resolved, that it is the sense of this convention, that the proceeds of the sales of all the public lands belonging to the United States in the future be appropriated amongst the several States, in the proportion of their Federal representation in the House of Representatives of the Congress of the United States, for the education of all the children of the different States, and in such proportion for Common Schools, Normal Schools, and Higher Educational Institutions formed by the General Government which shall be deemed most expedient and just by Congress, and making such concessions in the distribution to the various States, on the score of illiteracy for a limited term of years, as may be necessary to place the children of all the States on an equitable footing, provided, however, that in the passage of any law by Congress, the right of pre-emption and the homestead are to be sacredly observed.

Resolved, That a commitee of one from each State and Territory represented in this Convention, be appointed by the President to memorialize Congress upon the subject.

The above resolutions were referred to the committee on resolutions.

DR. W. T. HARRIS, of Missouri, in behalf of a committee presented the following report on

A COURSE OF STUDY FROM PRIMARY SCHOOL TO UNIVERSITY.

The undersigned, appointed a committee to report a Course of Study for all grades of Schools, from the Primary School to the University, beg leave to submit herewith the results of their deliberations on this important theme.

At the outset, your Committee found it necessary to investigate a number of difficult questions, all of which had a practical bearing upon the definition of a Course of Study, its extent, and the relations of its several parts. In most instances these questions were suggested by real collisions shown to exist between the views held by the expounders of the various educational systems established in this country.

A brief review of these questions is essential as a preliminary introduction to the grounds which have influenced your committee in the recommendations which they venture to make.

1. The first question relates to the proper beginning of a course of study; at what age should the pupil be admitted to school? Upon this depends, in a large measure, the character of the studies and the temper of the discipline in the primary school. It is important here to consider the modifying effects of climate and the nature of parental training at home. In the Northern sections of the country, children may attend school one or two years earlier than in the Southern sections. A child may be safely placed in school at the age of five, or even less in the cooler climates, and assigned the ordinary tasks in reading and arithmetic at once, while in warm climates he must begin school at six or seven years of age, or if earlier, his tasks must be of a less severe character and not so prolonged.

To some of your committee the Kindergarten has commended itself as a desirable beginning of the primary course. At the age of five years, possibly at four, the child may be brought under its training. The principal objects aimed at in the Kindergarten course of instruction are—(1.) Skill in the recognition and production of forms. The hand and eye are disciplined in the most effective manner by the several occupations of cutting out shapes in paper, weaving patterns in different colors, perforating card-board and working pictures in colored threads, construction of geometrical and other figures by means of sticks and softened peas, modelling of designs in clay, ruling paper, and drawing symmetrical figures. (2.) The theoretical knowledge of form and number, is trained by the use of blocks representing the elementary geometrical solids; counting, the elementary rules of arithmetic, the use of fractions, are taught by means of these blocks. (3.) Besides this, the child is taught valuable lessons in manners. He eats his lunch at the table spread in a proper manner, and learns neatness, cleanliness, and the conventional etiquette that marks polite behavior at meals. (4.) In the games which are played, the imagination is exercised in a lively manner, and the healthful training of the body is secured. The session of the Kindergarten usually lasts for about three hours per day, and may continue for one or two or three years, according to the age of the pupil upon entrance. It is to be remarked that the element of play is not so prominent a characteristic of the Kindergarten as is claimed by some of its advocates. Moreover, the nurture of the child's individuality and originality of character, which is obtained in play, is not to be expected from the play that is permitted in the Kindergarten, so much as in the untrammelled exercise of his faculties when outside of the school-room. Play involves a negative exercise of the will in caprice and destructiveness that is essential, no doubt, to the develop-

ment of the feeling of independence and original power which forms the basis of character. But the school must always direct the pupil's efforts into special rational channels of activity, and hence act as a restraining influence upon the untamed will. The Kindergarten restrains, though in the gentlest manner possible. It furnishes a training nearest approaching that of the family; and is the proper transition from family to school. A year spent in cultivating manual skill, and in the acquirement of a familiar knowledge of geometrical form and numerical computation, as well as a training in polite habits and usages at so early an age, must be a powerful influence in moulding the future life of the child.

2. Where the Kindergarten does not precede the ordinary course of primary instruction, the first studies of the course are reading, writing, and arithmetic.

The second difficult question that met your committee in their investigation was to determine the precise value of these and other elementary studies both as regards discipline of mind obtained in their acquirement, and the usefulness to the individual in gaining further knowledge. It was necessary to compare one branch of study with another. While some educational writers contend that the art of drawing, or oral lessons in natural science are of more real importance than reading and writing, or arithmetic, others contend that the latter studies are of a fundamental character, altogether unique and not to be compared with the former for the reason that these studies (reading and arithmetic) are of universal use and value, while such studies as drawing and the natural sciences are special in their character. The arts of reading and writing enable their possessor to participate in the treasured wisdom of the race. Without them he can gain knowledge only through his own senses and the oral tradition of his companions. By the aid of reading and writing he can avail himself of the senses of all mankind in all ages of the world and transmit his own contribution to the race in turn. By arithmetic, he is able to measure the quantity of the world about him, at least as far as he can reduce it to number. Deprive man of the power of counting and calculating, and the world of things recedes into a vague and uncertain relation to him so that his power over it diminishes to zero. With numerical calculation he can divide and conquer it—he can rule matter by spiritual might; without this art his relation to the world is that of the savage to his fetish.

In whatever form this question has been viewed by your committee, the paramount value of reading, writing, and arithmetic over all other branches in the course of study has been manifest.

But this has not fully decided the question. The most useful studies do not of necessity altogether exclude less useful studies.

3. Here, accordingly, your committee met another difficulty, to-wit:—how to decide the amount of prominence to be given to industrial branches in comparison with those chiefly productive of theoretical culture.

That which seems to lie nearest to the realm of usefulness to the individual is his special trade or vocation. His culture-studies are not so directly useful, but are useful at more points in his life and for a greater period of time. In late years we have seen the whole course of study

challenged. The primary school has been called upon to fit the pupil for the actual demands of life. The college and university have been asked to dispense with certain of their disciplinary studies and adopt others of greater immediate usefulness. Less Latin and Greek and more Science of Nature and Man, has been the demand. The Course of Study has received great modifications; the number of elective branches has been increased. Still the proper adjustment between culture-studies and practical studies does not seem to have been found. Now that education, as an element of national strength, has excited so much attention and become the object of so frequent legislation, we are the more perplexed by this problem. Indeed there are many problems here.

4. The question of public and private schools meets us first. On the one hand it is contended in the interest of productive industry, that the public schools, being for the masses who are destined to fill the ranks of common laborers, should give a semi-technical education, and avoid purely disciplinary studies. The latter should be reserved (it is thought) for academies and preparatory schools founded by private enterprise and open to such of the community as can afford to patronize them. This means a division in the course of study—one branch of it tending towards the arts and trades—the education of the laboring classes; the other branch tending towards high culture—"a liberal education," as it is called. This important question, therefore, met your committee in this shape: Is the best course of study for the future common laborer, a part or portion of the longer course of study designed to educate the professional man? Is the complete course of study the same for culture and business and the professions, so that whatever section of it be cut off from the beginning, furnishes the best course up to that point, whether regarded as preparatory to a continuation of the course of study, or as a completed course fitting one for business? To settle this point it was essential to consider in detail the nature and effects of such differences in the course of study as had come to exist in our educational systems, and especially the tendency to separate the preparatory course for colleges and universities from that pursued in the common schools.

The course of study as originally planned for our colleges was a continuation of that in the so-called "Grammar School" in which Latin grammar was the most important branch of the curriculum. The common-school course was very meagre, and that of the grammar school and college was well enough as a continuation of it. At that time very little development had taken place in the sciences of nature and man; English literature had not yet become a great power among the people; the printed page in the form of the newspaper and magazine had not yet opened to the individual the great possibilities of continuing his theoretic education. What was then a "liberal education" is inferior to a common education now. Although higher education demands only the same disciplinary studies as preparatory to it, that it did formerly, merely increasing the amount, and has recognized the modern growth of literature and science and history by additions to the end of its course, in the common school so much has been added to the disciplinary studies as completely to change the course. The branches which initiate the

pupil into the sciences of man and nature are better and better provided for year by year. The curriculum is continually modified so as to adapt it more fully to the wants of the individual in this epoch. But the higher education has yielded far less to the demands of the age. It has succeeded in repelling the collateral and information-giving studies from its preparatory course, and it admits them only in the form of a supplement at the close of the course.*

The course of the common school tends to take the pupil through the elements of the collateral studies before his preparation for college, while the course of the college and its special feeders, the academies and classical schools, does not reach those studies until after five to seven years' apprenticeship in the purely disciplinary studies is completed.

This difference appears most marked in the course of the public high school, as contrasted with that of the special preparatory schools. In the district school are taught reading, writing, arithmetic, geography, grammar, and history of the United States. In the course of study in the public high school, we find Latin and Greek, French and German, algebra, geometry, natural philosophy, physical geography, physiology, universal history, English literature and rhetorical work. But a preparation for college usually omits all except the Latin, Greek, and mathematics. Hence the public high school is obliged to provide for a classical course and a general course, if it would continue the common-school course and

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*The Forty-Eighth annual report of the President of Harvard College announced certain changes in the requirements for admission to that university which indicated very clearly a perception of the difficulty herein described. A better preparation in English literature, natural science, and modern languages (French or German) was required. Upon this the report remarks as follows:

"In all changes in the preparatory course of study which have been here set forth, the single aim of the Faculty has been to make that course correspond more nearly with the best possible course of study for young men, up to an average age of eighteen, who propose to pursue non-professional studies for four years more. As the learning given in American colleges has been predominantly classical and mathematical, it is not surprising that the proficiency of a candidate in Classics and in Mathematics has been the point chiefly considered in examinations for admission. That teachers and pupils in preparatory schools should direct their efforts mainly to meeting these specific demands of the colleges, and should subordinate the intrinsic importance of studies to their serviceableness in securing admission to college, is the only result that could be expected. Neither teacher nor pupil could be much blamed, for instance, for practically setting the writing of good Latin above the writing of good English. It is plain that the only remedy for this grave evil is for the colleges to show by the nature of their admission examinations that they will not accept the rudiments of *scholarship* as amends for deficiencies in the rudiments of *education*. The colleges, as the representatives of the value of the study of the Classics, should be especially careful not to give plausibility by any act or neglect of theirs to the groundless assumption that the discipline of mind secured by the preliminary classical training must be purchased by the sacrifice of some knowledge which a well-educated young man of eighteen ought to possess. Co-operation on the part of the leading colleges is much needed in enforcing upon teachers, and in enabling them to enforce upon their pupils, the necessity of thorough training in all the elements of a sound education. As soon as those colleges unite in demanding of candidates for admission a thoroughly good training in English no less than in classical subjects, the schools which feed the colleges will in turn be able to exact from the lower schools an efficiency which they now greatly lack. The service which American colleges could thus indirectly render to American education it is difficult to overestimate. Were a good degree of proficiency *in a well-constructed course of English studies* strictly enforced as a condition of admission into our leading colleges, the quality of education received by all pupils in all schools directly or remotely affected by such action would be sensibly improved. Hitherto a too exclusive concern for proper preliminary training in the Classics and Mathematics has cut off the higher institutions for education in this country from a part of that influence upon the lower which it is both their interest and their duty to exercise."

at the same time prepare its pupils for college. The influence of higher education upon the lower is to force the latter to drop its collateral and information-giving studies.

Meanwhile the demand of the age upon the college to curtail its disciplinary and culture-studies, and to give more prominence to the natural sciences is met only by the increase of these branches in the latter part of the course, as well as by the establishment of scientific schools separate from the regular philosophical course; when these separate schools require as a condition of admission to them the completion of the regular college course, they do not fulfil in a direct manner the popular demand; when they admit pupils without such preparation, they omit the culture and discipline which they claim to be essential to success in the pursuit of higher science.

5. In view of these facts your committee proceed next to consider the question of classical culture. Are Latin and Greek essential to a course of study that shall give thorough discipline to the powers of the mind? What special advantage to culture is derived from the study of Latin and Greek over that derived from the study of Modern Languages—say French and German? That these ancient languages have no advantages as regards their form or capability of expression—one may convince himself by comparison. But when it is remembered that English-speaking peoples derive from a Teutonic source only those words expressive of special and familiar relations and ideas, while for all the fine shades of thought and generalization they resort to the Latin and Greek vocabulary, it will easily be seen how important is a direct knowledge of those tongues to us if we would understand readily the language of thought, and express with ease the results of reflection and generalization.

The scientific method prevailing in our time tells us that to know a subject properly we must study it in its history. We must be acquainted with its embryology and growth. In this insight we have also a clue to the nature of the much prized disciplinary value of classic study. The classics of a people include the earlier writings belonging to the period of the evolution of its civilization. A study of its classics places one in possession of the seeds and elementary phases which have expanded and grown into its later life. The civilization not only of the Anglo-Saxon people, but of the Romanic, Teutonic, Sclavonic, and Celtic peoples of Europe is a Roman and Greek civilization. Greece and Rome originated the stock of ideas that form the basis of our institutions. The Greek mind explored the domain of theoretic and æsthetic culture, and science draws its categories to-day from the Greek language; while art points to Greek literature and Greek sculpture and architecture for perfect models. What culture we have in these directions cannot be well acquired by the individual nor fully comprehended by him without recourse to its original fountains. Rome furnished the organizing forms of our civilization; and our jurisprudence and legislation still pronounce their edicts in Roman words; and the form of our institutions in which we live and move and have our being as a civil community—as a State, a municipality, a corporation, a free citizen endowed with rights—is Roman. To know ourselves, to realize our past history, and to make alive within ourselves the consciousness of the development of

our civilization, we must for a period come into close contact with the literature in which Greece and Rome portrayed their national life. Language is the clothing of the ideas of a people, a garb woven of poetic phantasy and prose reflection. In it we reach the germinal cell-growth of the ideas of a people. In this respect the study of Latin and Greek furnishes to a European or an American a far higher means of culture than does any modern language. No one modern language is an embryonic type of another, nor does its literature portray the embryonic form of the civilization of another people, even though it may be an "arrested development" of some type of civilization. To study the embryology of the butterfly, we must begin with the caterpillar and not with the house-fly. So to understand the frog we must study the tadpole rather than the turtle. French and German have their own evolution and their own embryology.

6. Pursuing this thought we come to inquire why it is that language in general should furnish so large a portion of the course of study. The spirit of protest demands: "why not *things* rather than *words?*" And yet education goes on dealing with *words!* If thought—scientific thought—be the end of culture and education, it is not strange after all that so much is made of the word that expresses it. Things are only transitory phases of processes in nature—the temporary equilibria in the great movement of forces. Science seizes the eternal laws or forms of the process itself and thus deals with what has more validity than the mere things. Words express not things alone but also forces—processes. The verification of the word is therefore not through things alone but through the synthetic activity of thought. Words stand for more than mere things.

Looked at as an object of knowledge the world is twofold; (a) the world of man—including his realizations in art and literature, in his political and social institutions, in his science and history; (b) the world of nature including the inorganic aspect, and the organic one of plant and animal. In the study of language we find the threefold world of man as theoretical, practical, and æsthetic. If we go so far as to call the world of man the most important of studies for man, we shall certainly call language the most important study of the course—the one which gives most clearness of insight to the mind and the most discipline to its powers. But while the perfection of man is the object and end of civilization and consequently of all other culture and education, on the other hand nature is the instrumentality by which this end is achieved. To the savage man nature is master and tyrant; to civilized man nature is servant and thrall. To omit the science of nature from any course of study, is to do wrong to the supremacy which man holds by reason of his empire over nature. To slight the science of language in a course of study, is to insult the object of all study itself.

7. The final difficulty which your committee encountered in their investigation is the one of the natural and proper order of development of the topics of the course of study in the mind itself. Such questions were met as these: "Why not get discipline of mind first before taking up collateral branches, such as the natural sciences, the national literature and history?" "These topics involve the highest reach of the mind to be understood properly." Or the counter position: "Why are not the natural sciences,

history, and literature as valuable discipline-studies as Latin, Greek, and mathematics? and if so, why not begin with them in a course of study?

Upon consideration of this question of the order of topics, your committee are of opinion that each one of the several fields of the objective world of man and nature should be represented at each point in the course of study. Nature in its organic and inorganic forms, mind in its theoretical, practical, and æsthetic forms. To those who object to collateral and information-studies side by side with the discipline-studies it may be said that they lay emphasis on the inorganic phase of nature by the exclusive study of mathematics and physics and on the theoretical phase of mind to the exclusion of the practical and æsthetic phases by the too exclusive study of grammatical forms and constructions.

To those who object to the study of topics that are too difficult to be understood in the most comprehensive sense, until the close of one's disciplinary course it is sufficient to point out the fact that every subject has its abstruse side and that no phase of natural or human history can be completely comprehended except in and through the world itself. Even the disciplinary studies themselves treat of topics that are not fully explicable until one has mastered the other studies.

The child seizes whatever subject he studies more vaguely than the adult. His active phantasy is his chief organ. Hence the descriptive phases of science can and should be learned early. In secondary education the classifications and relations come properly to be considered — reflection is then the chief mental activity. In the highest phase of education objects are studied as organic wholes—each individual is seen through the perspective of its history.

Without previous familiar acquaintance with a subject obtained by studying its first or descriptive phases, one gets very little insight into the philosophy of it, even though he listens to the exposition of a Huxley or Agassiz.

That mathematics and the classic languages are justly regarded as disciplinary studies in a sense that will not apply to the other studies, is pretty evident from the reasons already given. Discipline is the process by which the will is purified from the sway of appetite and caprice. In his infantile state, as child or savage, man's will is implicit—not separate from his desires or appetites. A child or savage is a creature of impulse. To become rational he must substitute principle for caprice; moral forms for impulses. The training requisite to emancipate the will and elevate it from the stage of impulse to that of moral activity, must needs possess the following essential characteristics: (a) It must occupy the pupil with what is remote from the interests of his every-day life; self-alienation is necessary to self-knowledge; in order to see our own dwelling in its relations to surrounding objects it is necessary to go out of it and stand at some distance. The atmosphere of the classic people of Greece and Rome furnishes the broad contrast to our every-day life which enables us to discriminate sharply the motives which unite to form our impulses. (b) Inasmuch as the civilization of those classic peoples is the embryonic form of our own, as has already been pointed out, the student of the classics has the advantage of seeing the universal, or regulative, forms of his life (the laws, institutions, and usages

which define his status as a human being,) in their special forms and applications. He learns more readily the universal by studying it, at first as a typical instance. The invisible cloak of forms wrapped about his life—invisible because of its general or abstract nature—thus becomes visible to him and he acquires the ability to separate his deed from his impulse by the insertion of general motives. Reflection takes the place of instinct and caprice. By studying that which has no direct and obvious relation to his immediate interests but which is allied to the general forms of his rational activity, the youth obtains breadth and perspective of practical insight. The disciplined mind makes its purpose a general one and does not allow caprice (likes and dislikes, weariness of the body, curiosity, love of ease or amusement,) to hold sway. Mathematics as the science of the general relations of time and space—the conditions under which the existence of nature is possible, has the same relation to man's physical existence as classic study has to his humane culture.

This mental discipline is not a matter of perseverance and industry simply, so that whoever studies any subject thoroughly will get the same amount of discipline as another, but the object studied must stand related to the student's general and rational forms of life and thought.

Assuming the division already indicated, our course of study will fall under five sub-divisions, each of which must be represented at every stage of progress. A careful survey of this ideal standard discovers the fact that with the exception of the divergence already mentioned between preparatory schools and the public high schools, there is a close conformity to the educational system generally adopted in the country. Were the college or university to require for admission a knowledge of the elements of natural philosophy and physical geography (the former a compend of physics and the latter of natural history), universal history, and English literature, and slightly less of Latin and Greek, it would remove the necessity of two courses of study in the high school.

The five sub-divisions are:

I. Inorganic Nature, treated in (a) mathematics, the science of the general form of nature as existing in time and space, and hence as quantitative; (b) Physics, molar and molecular, including the science of the contents of nature in their quantitative aspect.

II. Organic Nature or Cyclic Processes, treated in Natural History and in all natural sciences which have for their object a cyclical process, whether that of life or not; hence, astronomy, meteorology, geology, botany, and zoology, and kindred sciences.

III. Theoretical Man or Intellect, treated indirectly in (a) Philology or the science of the instrument invented for the reception, preservation, and communication of thought; treated directly in (b) Philosophy which investigates the universal and necessary conditions of existence or the forms of the mind that appear in logic, psychology, ontology, and other spheres more concrete, The study of grammar is the propædeutic to this field.

IV. Practical Man or Will, treated in (a) Civil History, which portrays man's progress in realizing forms of freedom by means of political organization: (b) Social and Political Science which investigates the evolution of institutions of civil society and their logical basis.

V. Æsthetical Man, or Phantasy, as developed in the Fine Arts, and especially in Literature as the symbolic portrayal of man to himself, the collisions of his real world with his ideal, and the reconciliation of the two.

In mapping out the provinces which shall be investigated, only a small portion of the work of preparing a course of study has been accomplished. It remains to select those branches of study which are to be pursued continuously from year to year throughout the course, and likewise to decide the amount of time to be given to the other branches, as well as their exact order in the course. In this difficult and delicate part of the task it becomes evident that within certain limits very much freedom may be allowed to the teacher and pupil, and in fact must be allowed. It is necessary to have each one of the five departments well represented in the course. But a choice may be made, for example, in the department of the study of organic nature, between botany, zoology, physiology, and geology, each one of these studies being a fair type of the rest as regards effect on the mind in culture or discipline. It must not be forgotten moreover that the age of pupils and the amount and quality of previous preparation will determine whether the course shall be very full or whether it shall embrace only a few of the representative branches; whether the special branches shall be continued for half a year each or for a whole year.

In the more important branches there should be no option left to the pupil in the high school, for example, all should be required to take Latin, Algebra and Geometry, Universal History, Constitution of the United States, History of English Literature, Rhetoricals, Natural Philosophy, and Physical Geography.

Omitting the phase of physical training, except in so far as the art of drawing secures it in the form of a culture of the hand and eye—a general propædeutic of manual skill—and not including the ground covered by the Kindergarten which would precede, or that of the special trades or professions which would succeed this general course, your committee present the following tabulated scheme for a general course of study from primary school to university.

DISTRICT OR COMMON SCHOOL.

TOPICS RELATING TO NATURE.

Inorganic.—Arithmetic, Oral Lessons in Natural Philosophy.

Organic or Cyclic.—Geography, Oral Lessons in Natural History.

TOPICS RELATING TO MAN; OR "THE HUMANITIES."

Theoretical (Intellect).—Grammar, (Reading, Writing, Parsing and Analyzing).

Practical (Will).—History. (Of United States.)

Æsthetical (Feeling and Phantasy.)—Reading Selections from English and American Literature. Drawing.

HIGH SCHOOL OR PREPARATORY SCHOOL.

TOPICS RELATING TO NATURE.

Inorganic.—Algebra, Geometry, Plane Trigonometry, Analytical Geometry, Natural Philosophy, Chemistry.

Organic or Cyclic.—Physical Geography, Astronomy (Descriptive), Botany or Zoology, Physiology.

TOPICS RELATING TO MAN; OR "THE HUMANITIES."

Theoretical (*Intellect*).—Latin, Greek, French or German, Mental and Moral Philosophy.

Practical (*Will*).—History (Universal), Constitution of the United States.

Æsthetical (*Feeling and Phantasy*).—History of English Literature, Shakespeare or some standard author, (one or more whole works read). Rhetoricals (Declamation and Composition). Drawing.

COLLEGE OR UNIVERSITY.

TOPICS RELATING TO NATURE.

Inorganic.—Analytical Geometry, Spherical Trigonometry, Differential and Integral Calculus, Physics, Chemistry, Astronomy, (etc., Elective.)

Organic or Cyclic.—Anatomy and Physiology, Botany, Zoology, Meteorology, Geology, Ethnology, (etc., Elective).

TOPICS RELATING TO MAN; OR "THE HUMANITIES."

Theoretical (*Intellect*).—Latin, Greek, French or German, Comparative Philology, Logic, History of Philosophy, Plato or Aristotle, Kant or Hegel, (or a representative of ancient philosophy and also one of modern philosophy).

Practical (*Will*).—Philosophy of History, Political Economy and Sociology, Civil and Common Law, Constitutional History, Natural Theology and Philosophy of Religion.

Æsthetical (*Feeling and Phantasy*).—Philosophy of Art, History of Literature, Rhetoric. The Great Masters compared in some of their greatest works: Homer, Sophocles, Dante, Shakespeare, Goethe, Phidias, Praxiteles, Skopas, Michael Angelo, Raphael, Mozart, Beethoven, &c.

W. T. HARRIS,
WM. F. PHELPS, } *Committee.*
ELI T. TAPPAN,

The HON. DAVID MURRAY of the Department of Education, Japan, was then introduced, and gave a brief account of the condition of education in that country. He said the world had been surprised at the rapid improvement made by Japan, which he said could only be accounted for by the fact that long before the opening of Japan to the world there was a system of education there. China was the mother country of Japan, who derived the origin of their arts, printed language and laws from that country. Their written language was introduced in the year 700 or 800, and at the same time the Buddhist religion, which also came from China, was introduced, the priesthood of this religion filling the same place in Japan as the priests of the middle ages did in the education of Europe. The Japanese nation early began to feel an interest in education, and a national university was established at an early date with a view of education. This lasted until the fall of the Tycoon's Government. From 1600 until 1868 education formed one of the principal objects of this government.

The national schools were for the training of only the retainers of the royal families and "landed gentry" of the country, but to-day almost the entire population of Japan can read and write. The speaker then proceeded to give some idea of the manner of educating the Japanese. He said the Japanese language had a vast number of letters and at least three thousand characters are taught the scholars in the schools. The scholar labors for years to learn to make these different characters, and it is only because he begins early that he is enabled to become familiar with them. It is necessary to begin the study of them young; grown-up people can never learn them all. It looks like an almost impossible task to learn to make ten or twenty thousand characters, but this is the number which many of the Japanese of learning are familiar with. Along with learning to write, the pupils are also taught to read, which consists in going over the letters and explaining them. The reason of this is because the colloquial language differs very widely from the written language. The pupils are also taught composition from their earliest education, and particular attention is paid to letter-writing. The books which the pupils read from are those on history, geography, and morality.

The pupils, after ten years' elementary study, are advanced to a classical department, where the great Chinese classics and their philosophy is also a subject of study, as well as the history of Japan and China.

The opening exercises in the old schools consisted of a lecture to all the scholars by a Chinese professor, upon some subject such as one of the maxims of Confucius, which was used as a sort of text, from which a sermon was preached. After this, the classes were divided up into sections, each of which had one teacher, and the subject of the lecture was considered in detail. At twelve o'clock they were all dismissed into the waiting-room, where more difficult studies were considered. At three o'clock the pupils were instructed in physical exercises.

The speaker said it was not a perfect education, but it was sufficient at that time. When the Japanese came in contact with foreigners a new world was opened to the mind, new wants were created. They found that if they were to compete with foreign nations they must learn their languages and study their arts. Only two years after the treaty with Commodore Perry a school of languages was established, and since 1859, when the old government of the Tycoon was changed and new departments were established, one was the department of education.

The new department created at the time of the change in the government made education open to all classes and established schools all over the country, 8,000 having been added since 1859. There is a normal school in the city of Yedo, established like the normal schools in this country, from which the graduates are sent as teachers to different parts of the country. Education is carried on in the language of the country.

Dr. Murray then introduced the Hon. Fujimaro Tanaka, Vice-Minister of Instruction in Japan, who briefly addressed the Association in Japanese which was translated by his interpreter.

TRANSLATION.

It gives me much pleasure to be present at this meeting, and to hear

from eminent educators valuable addresses on the great and important subject of education.

Let me say in a word, that as far as I have observed, your education has attained the highest point in the world. This, I have no doubt, is due to your earnest labors.

It is not necessary for me to speak of our educational system, as DR. MURRAY has told you the rise and progress of Japanese education. I take the subject of newspapers in Japan. Newspapers in my opinion, have a great deal to do with the education of the people, for they are an echo of education, as it were.

Up to 1865, we had no regular newspapers published, that is, newspapers in the modern sense, but in the same year, YANAGAWA HARUKAGE first started a paper called "Chiu-Gai-Zashi," which may be translated "Home and Abroad News."

The people soon found out the importance of newspapers, not only as a means of learning passing events in the far West and East of this wide world, but also, as that of educating themselves, and inasmuch as they appreciate the value of newspapers, their number has been increased from time to time.

In 1873, ninety-seven different newspapers were published in Japan. At that time less than ten years had elapsed from the first publication of the newspaper. In 1874, twenty-seven more, and in 1875, thirty-two more were added.

We have now more than one hundred and fifty different papers in Japan, some of which, are, of course, published daily, some weekly, and some monthly. Thus the people even in villages know something about the affairs of the world.

If there were no newspapers, as was the case with us about ten years ago, we should not know the condition even of our neighboring countries! Happily, we have so many newspapers now-a-days that we can learn what the brethern and sisters are doing on this side of the Pacific Ocean; and we read to-day what occurred yesterday in Europe. Really this is the gift of newspapers.

SENOR DORNA, of the Argentine Confederation, chargé d'affaires to the United States, was introduced and briefly thanked the Association.

The President announced the following Committee to confer with the committees of Congress on the National Bureau:—Dr. C. K. NELSON, Md., Hon. J. H. SMART, Ind., Hon. J. P. WICKERSHAM, Pennsylvania, Hon. H. A. M. HENDERSON, Kentucky, Dr. W. T. HARRIS, Missouri, Dr. D. B. HAGAR, Massachusetts, Prof. B. MALLON, Georgia, Hon. S. M. ETTER, Illinois.

On motion of E. E. White, of Indiana, President PHELPS was added, as chairman of the Committee on Bureau.

The Hon. Warren Johnson, of Maine, from the Committee on Centennial, asked to be allowed to report next year, but was requested to prepare a report for publication.

It was moved that the gentlemen representing foreign governments be requested to furnish copies of their remarks for publication.

Adjourned to meet on board the boat at 8:30, P. M.

WEDNESDAY EVENING.

The Association was called to order on board the boat at half past 8 o'clock, President PHELPS in the chair. The President called on W. D. HENKLE for a speech. Mr. HENKLE responded that the Association was in debt, and needed five hundred dollars for the publication of its proceedings. Through successive appeals he received the following pledges:

LIFE-MEMBERS.

John Hancock, Dayton, Ohio.
W. D. Henkle, Salem, Ohio. Paid $20.
M. C. Stevens, Salem, Ohio.
J. Adolph Schmitz, Wooster, Ohio.
Alex. Forbes, Cleveland, Ohio.
L. S. Thompson, Sandusky, Ohio. Paid $20.
M. A. Newell, Baltimore, Md.
Sarah E. Richmond, Baltimore, Md.
C. K. Nelson, Annapolis, Md.
W. A. Bell, Indianapolis, Ind.
E. E. White,* Lafayette, Ind.
T. Marcellus Marshall, Glenville, W. Va. Paid $20.
C. C. Rounds, Farmington, Maine.
W. T. Harris, St. Louis, Mo.
Jas. S. Rollins, Columbia, Mo.
S. S. Laws, Columbia, Mo.
J. P. Wickersham,* Harrisburgh, Pa. Paid $10.
Edward Brooks, Millersville, Pa.
J. R. Malone, Dallas, Texas.
Allen Armstrong, Sioux City, Iowa.
S. D. Beals, Omaha, Neb. Paid $20.
Mrs. M. A. Stone,* New Milford, Conn. Paid $10.
James Cruikshank,* Brooklyn, N. Y. Paid $10.
G. Videla Dorna, New York, N. Y. Paid $20.

LIFE-DIRECTORS.

S. H. White,* Peoria, Ill.
W. F. Phelps,* Winona, Minn.

DONATIONS.

J. B. Peaslee, Cincinnati, Ohio, ... $20 00
Alex. Forbes, Cleveland, Ohio 20 00
J. H. Smart, Indianapolis, Ind 10 00
Edward Olney, Ann Arbor, Mich 10 00

SUBSCRIPTIONS FOR VOLUME OF 1875, AT $1 EACH.

J. P. Wickersham, Harrisburgh, Pa ..... 50 copies.
S. H. White, Peoria, Ill ..... 20 "
M. B. Sloan, Pittsburgh, Pa., 401, Wood St ..... 5 copies, paid.

FOR VOLUME OF 1876.

W. T. Harris, St. Louis, Mo	60	copies.
J. P. Wickersham, Harrisburgh, Pa	50	"
W. F. Phelps, Whitewater, Wis	25	"
M. A. Newell, Baltimore, Md	25	"
J. H. Smart, Indianapolis, Ind	25	"
Alex. Forbes, Cleveland, Ohio	15	"
B. Mallon, ———, Ga	10	"
M. B. Sloan, Pittsburgh, Pa	5	"

Those names marked with an asterisk are of persons who were life-members on the old basis of a payment of ten dollars, and who have chosen to add ten dollars more and become life-members on the new basis. The tally was kept by the reporter of the Baltimore Sun. Messrs. S. H. White and W. F. Phelps pledge $90 to their former payments, and thus become Life-Directors.

On motion of W. T. HARRIS, of St. Louis, the paper of J. W. HOYT, on the National University was continued to the next session of the Association. S. H. WHITE, of Illinois, moved that the papers of the Association be placed in the hands of the printer within one month.

E. E. WHITE, of Indiana, Chairman of the Committee on Resolutions, reported as follows:

Resolved, That the National Bureau of Education established by Congress in response to the petition of this Association, has more than met the expectation of the teachers of the United States.

Resolved, That the publications issued by the Bureau have been instrumental in awakening a more general interest in the subject of universal education.

Resolved, That as a connecting link between the various State systems of public schools, the Bureau is exerting an influence appreciated and acknowledged throughout the Union.

Resolved, That no other department of the general government (considering the small amount appropriated for its support), has done so much for the best interests of society.

Resolved, That all the teachers and friends of education in the United States should generously aid the Commissioner of Education, by promptly responding to all his calls for information, and by disseminating among the people the information furnished by the Bureau over which he presides.

Resolved, That the Committee on the National University, appointed at the last meeting of the Association, is hereby continued, with authority to fill vacancies and add to its number.

Resolved, That the officers of the Association are entitled to the commendation of its members for the excellent programme and for the other arrangements, made for the success of the meeting.

Resolved, That the thanks of the National Educational Association are hereby returned to the Governor of Maryland, and the Mayor of Baltimore, for the hearty welcome and greeting extended in the name of the citizens of the State and City, and to the local committee for the admirable arrangements made for the meetings of the Association and the entertain-

ment of its members, and especially to the teachers of Baltimore for the delightful boat excursion with its sumptuous collation.

Resolved, That next to liberty, education has been the great cause of the marvellous prosperity of the Republic in the first century of its history, and is the sure and only hope of its future. The highest concern and the grandest duty of the new century now opened, is the right education of every child born into American liberty.

The report was accepted.

On motion of J. H. SMART, of Indiana, the resolution of Maj. ROLLINS was adopted, and passed to the committee appointed to confer with the Bureau.

It was moved that the especial thanks of the Association be tendered to the Press for their courtesy. Also that the especial thanks of the Association are due to the following committee on the boat ride and collation:—Miss E. A. BEAR, Miss S. S. RESE, Miss SUSIE BALDWIN, Miss ADELINE KENNY, Miss ANNIE MCBEE, Prof. WM. ELLIOTT, JR., Prof. D. H. HOLLINGSHEAD, and Prof. GEO. DUBREUIL.

The Minister of Education from the Argentine Confederation spoke as follows:

Mr. President, Ladies, and Gentlemen:—

In the very remarkable speech delivered by the President of this Association we all heard words very complimentary to the Argentine Republic, and to its last President, SENOR SARMIENTO. I thank you most sincerely in the name of my country for this expression of friendship, coming as it does from a very distinguished American Educator, for our Argentine Educator; for many Americans know that SENOR SARMIENTO has devoted all his life to educational matters. From the school-room, he was sent to this country as its Diplomatic Representative, the Argentine government believing *then* as it now believes, that the secret of the happiness and greatness of the American people is closely connected with their system of education. When SENOR SARMIENTO was in this country a presidential election took place in the Argentine Republic, and he was elected to the Presidency by the unanimous vote of fourteen States, which office he honorably filled during six years, the duration of our presidential term.

When he was President he apppointed as Minister of Public Instruction, Dr. AVELLANEDA, a young man, 30 years of age, whom for his great talents and great achievements in behalf of education, the Argentine people called, at the expiration of SENOR SARMIENTO'S term, to the Presidency of the Republic. You see, Mr. President, that these are facts that prove conclusively that the Argentine people know where to find their great benefactors, and what are the wants of a country ruled by Republican institutions. The cause of education is a national one in the Argentine Republic—and we always ask our public men to show their ability in educational affairs in preference to any other of national interest.

As a proof that Republican institutions are written not only in our laws, but also in our hearts, I have the very great pleasure to inform you, Mr. President, that your friend, SENOR SARMIENTO, after the expira-

tion of his presidential term, accepted the humble and honorable position of General Superintendent of the schools of the State of Buenos Ayres—one of the fourteen States that compose the Argentine Union, or Republic, or Confederation.

The American school system of education is our own system,—as the constitution of the United States is our national constitution. It is the opinion of our great men that to preserve and develop our liberty, we must always look for a model, in this great Republic. We have employed in this work Professor HARVEY, MISS WADE, and many other American teachers, and we intend to increase, as far as possible, exclusively with teachers brought up in this country. I have lately received a commission to engage four lady teachers, and only await for the arrival of my chief, to take final steps on the subject.

The administration of SENOR SARMIENTO was a very fruitful one for the cause of education. Fourteen large colleges, two Normal schools, three schools of agriculture with their model farms, two schools of Mineralogy, one Academy of Science, one Astronomical observatory with Prof. GOULD as director, and 140 popular libraries. All these institutions were established within the six years of his administration.

OUTLINE OF ARGENTINE SYSTEM.

1. Common education. 2. Secondary education. 3. Higher education.

1. Common education, under the control of State and municipal governments. Definition. The elementary training of man; his initiation into the secrets of intellectual and moral life. National government; co-operation by means of exhibitions, books, models, apparatus, supervisors, or superintendents.

Obligatory and Gratuitous Education.—The principle is not a uniform system—we are in want of the necessary agencies to enforce it.

School fund.—Capital not to be touched; the interest to be employed in the acquisition of lands and construction of school buildings.—State constitutions.

RELIGION—*Secularization of Teaching.*

Notwithstanding the majority of the Argentine people are Catholics, the schools are not in the hands of the priests, and those children that are not Catholics are not compelled to attend to the teaching of the Catholic religion.

The present Minister of Public Instruction, Dr. LEGUIXAMON, in his report to Congress, says:—"Notwithstanding that every man ought to have one religion, and that every one wishes to have it taught to his children, the public school, supported with the income of men belonging to different sects, ought not to teach one religion to the exclusion of the others, without having at least the consent of all the parents, especially in communities like our own, where advancement depends in a large scale on European immigration belonging to different creeds."

In some States of the Argentine Republic there is a logical division and classification of elementary teaching, but it is not a uniform system. Dr. *LEGUIXAMON in his* report says: The American system ought to be con-

sulted exclusively on this subject. Its graded schools, (Primary School, Secondary School, and High School), demonstrate the advantages of the division of teaching since this division of labor multiplies and ameliorates the production.

WOMAN.

Modern civilization has placed woman in the high position of teacher of man. Where she trains the hearts of youth, we are sure to find a Christian people, virtuous, and friends of progress,—where not so, as is the case in the Eastern countries, we find communities without consciousness either of their physical strength, or of their moral capacity for good.

Societies of distinguished ladies in Buenos Ayres and in all the Argentine States, are in charge of schools, hospitals, and charitable institutions.

THE AMERICAN WOMAN—AS A MODEL WORTH IMITATION.

Notwithstanding all the facts, says the Minister of Public Instruction, we have got to do a great deal to place the Argentine woman in the same rank of the American woman. Her most noble work is undoubtedly the education of that great Republic, whose free institutions are the glory of mankind.

The establishment of fourteen Normal schools for the training of women, is a proof that the education of women is considered a national necessity.

SECONDARY INSTRUCTION.

1. State governments.
2. National government.—By fourteen different colleges,—one in each State.

General plan of studies.—Duration six years.

Libraries.—Cabinets of Mathematics; Physics; Laboratories of Chemistry; Museum of Natural History.

HIGHER EDUCATION.

National University of Cordoba—Philosophy and Grammatical Studies.

1. Law, Mathematics, Medicine, Physical and Natural Sciences.
2. Two Schools of Law.
3. Three Schools of Agriculture.
4. Two Schools of Mineralogy.
5. School of Painting.

Next to the duty of self-preservation, there is no higher, no more sacred duty which a nation has to fulfil, than to promote National Education.

Now Ladies and Gentlemen, let me read in conclusion, what Niebuhr said about the profession of schoolmaster,—and remember he said it after he had been Prussian Ambassador at Rome:

"The office of a schoolmaster, in particular, is one of the most honorable, and, despite all the evils which now and then disturb its ideal beauty, it is for a truly noble heart, the happiest path in life. It was the path which I had once chosen for myself, and how I wish I had been allowed to follow it!"

The Hon. JOHN T. MORRIS, President of the Board of Education of Baltimore, as its representative, said the Board were pledged to use every effective means not only for Primary and Secondary education but were equally pledged to the same means for Higher Education.

An experience meeting and congratulatory speeches followed, in which H. E. SHEPARD and M. A. NEWELL, of Baltimore, and J. B MALLON, of Georgia, participated.

The retiring President, Prof. W. F. PHELPS, thanked the Association for the distinguished honor bestowed upon him, and the many courtesies shown him; and the President elect, the Hon. M. A. NEWELL, thanked the Association for the honor just conferred.

The Association adjourned by singing the Doxology.

☞The following paper by ALEXANDER HOGG, of Auburn, Alabama, now of Bryan, Texas, was prepared to be read before the Association, but was not read. No allusion to the paper appears on the minutes, indeed no reference was made to it in the final programme, but as it was referred to in a previous programme, this place seems to be most appropriate for its insertion.

THE LACKS AND NEEDS OF THE SOUTH EDUCATIONALLY—THE DEVELOPMENT OF HER NATURAL RESOURCES—THE REMEDY.

Since the announcement of the above subject for this occasion, I have been, of course, more directly engaged in the study of these—especially in regard to the State of Alabama; being better acquainted with, and more intimately allied to her interests—her resources, and their development. And I am happy to say my investigations, my comparisons, and deductions have convinced me; and, I trust, through this paper to lead you to examine the same subjects, believing, as I do, that you too will be forced to the same conclusions—that we are not so far behind our *Sister-States* educationally, as at first sight, they and others casually looking at the matter have been in the habit of believing.

I hope the interest to you in my subject, may alleviate in a measure, the dryness of detail. That the rehearsal of tabular facts about the education, the means and provisions established at the very beginning,—upon the admission of Alabama into the Union may give a charm to the whole subject—may really invest it with the delightsome and sweet influence of romance.

I have always claimed that we know too little of each other—and that little imperfectly. Hence I have rejoiced at the formation of NATIONAL ASSOCIATIONS, whether educational, scientific, or social; because they give opportunity of bringing together our great family—our brother and sis-

terhood of States—our men of letters, of science, of government. I rejoice to-day to be permitted to read this paper on this subject, and on this occasion—on this, the Centennial of our Free Republic.

Alabama came into the Union 1819, with a constitution clearly defining her position upon the education of her people, in this unmistakable, succinct and definite language:

"Schools and the means of education shall forever be encouraged in this State; and the General Assembly shall take measures to preserve from unnecessary waste or damage such lands as are, or hereafter may be, granted by the United States, for the use of schools, within each township in this State, and apply the funds which may be raised from such lands in strict conformity to the object of such grant. The General Assembly shall take like measures for the improvement of such lands as have been or may be hereafter granted by the United States to this State for the support of a seminary of learning; and the moneys which may be raised from such lands by rent, lease, or sale, or from any other quarter, for the purpose aforesaid, shall be and remain a fund for the exclusive support of a State-university, for the promotion of the arts, literature, and the sciences; and it shall be the duty of the General Assembly, as early as may be, to provide effectual means for the improvement and permanent security of the funds and endowments of such institution."

By an act of Congress, approved March 2, 1827, the Legislature of Alabama was authorized to sell its school land, with the consent of the inhabitants of the towns in which it was located, and to invest the proceeds in some productive funds. The share due to each township and district was to be in proportion to the value of lands in each. If insufficient for the support of schools, the income might be invested until the principal was sufficient for the maintenance of schools.

The code of 1852 defines the university-fund as the sum of $250,000, for the permanent security of which and the punctual payment of the interest thereon at the rate of 6 per cent a year forever the faith and credit of the State were pledged. In 1866 the Legislature increased it to $300,000, bearing 8 per cent, payable semi-annually.

As in other States, higher education claimed first the attention of the people, and provision was made for the establishment of the University. This charter bears date 1820, and the University did go into operation in 1831. The funds for both the primary as well as higher instruction grew out of the munificent grants of the general government; hence the peculiar wording of the Constitution, article Education.

"The General Assembly shall take like measures for the improvement of such lands as have been or may be hereafter granted by the United States to this State for the support of a Seminary of learning."

The organization of the Public Free Schools was still later—was not freely and effectively in operation till 1855.

"During the year 1856 it appears that one to every four and one-third of the total white population (as shown by State census, 1855) attended school. This was a larger ratio than is exhibited by the school statistics of twenty-five out of the then thirty-one States in the Union.

"In 1857, three years after the inauguration of our common-school sys-

tem, we find that Alabama stands proudly among her sister States of the Union. The following table is taken from Appleton's Cyclopedia (Vol. V., title, *Common Schools*):

State.	Population.	Whole numb'r schl'rs attending school.	Am't of annual cur'nt expen's's for schools
Alabama	841,704 ½ negroes.	89,160	$490,690
Connecticut	370,792	71,269	322,253
Virginia	1,421,661	41,608	156,000
Georgia	935,000	77,015	.....
Mississippi	606,526	18,746	36,000
Maryland	583,034	33,111	.....
New Hampshire	317,976	85,245	263,625
Vermont	314,120	90,110	265,623
Iowa	509,414	79,679	198,143
Louisiana	587,774	36,000	200,000
California	507,067	9,717	156,712
Massachusetts	1,133,123	203,031	1,418,364
New York	3,470,459	832,735	3,275,217
Pennsylvania	2,311,786	593,837	1,609,818
Indiana	988,416	195,976	732,934

"From this table it appears that in 1857 our State, in proportion to her white tax-paying and school-attending population, was far ahead of nearly all the Southern States and most of the New-England States; was the superior in the school-room of even Massachusetts, and was almost the peer of New York and Pennsylvania.

"During that year the public school moneys distributed among the townships of the State paid 57 per cent of the entire tuition in the public schools—the total expenditures, as estimated by the Trustees, being $474,370.52.

"In 1855 Total distribution of money for the support of schools was.....$232,415.39

" 1856..... 267,690.41

"In 1857 it had increased to $281,874.41.

"With this annual increase in funds, there is found a corresponding increase in the salaries paid teachers.

"In 1856 the total cost of the public schools to the State and to the people (for it must be remembered that the people supplemented the State fund) as estimated by the Trustees was $490,278.19.

"In 1857 it was $552,984.11—thus clearly indicating greater liberality upon the part of the people in the compensation of teachers.

"This improvement was undoubtedly the result of the operation of the previous year, in which the people saw more than half of the tuition of their children paid by the public fund.

"The population then (1857), according to the State Census, was 841,704, of which one-half were negroes—making really, for school population *420,852.*

"The number of children enumerated 1855, was 145,518. For 1856, 171,073; or over one-third of the white population was embraced.

"There were included, however, in this estimate, 197 private schools, having 3,774 pupils; 74 Academies with 3,955 pupils; 20 colleges with 1,690 students; a majority of the colleges were for females, and were unendowed.

"If to these be added the pupils in Mobile County (having an entire and separate system), there will be shown an actual attendance of 100,279, or one-fourth of the entire white population—a comparison which favorably puts Alabama among the foremost States in regard to educational interests."—*Supt. Perry's Report*, 1857.

Passing from 1857 to 1875, a period of 18 years, I come to the last report of the present Superintendent of Public Instruction, Hon. JOHN M. MCKLEROY. But before quoting from this, I desire to quote from the organic law—the Constitution of 1868—setting forth the views of the people of Alabama upon the education of their children, now that the smoke of battle and the din of arms have fairly passed away.

Art. XI, Sec. 10. "The proceeds of all lands that have been or may be granted by the United States to the State, for educational purposes, of the swamp lands, and of all lands or other property given by individuals or appropriated by the State for like purposes, and of all estates of deceased persons who have died without leaving a will or heir, and all moneys which may be paid as an equivalent for exemption from military duty, shall be and remain a perpetual fund, which may be increased but not diminished, and the interest and income of which, together with the rents of all such lands as may remain unsold, and such other means as the general assembly may provide, shall be inviolably appropriated to educational purposes, and to no other purpose whatever.

§ 11. In addition to the amount accruing from the above sources, one-fifth of the aggregate annual revenue of the State shall be devoted exclusively to the maintenance of public schools.

§ 12. The general assembly may give power to the authorities of the school-districts to levy a poll-tax on the inhabitants of the district in aid of the general school-fund, and for no other purpose.

§ 13. The general assembly shall levy a specific annual tax upon all railroad, navigation, banking, and insurance corporations, and upon all insurance and foreign-bank and exchange agencies, and upon the profits of foreign bank-bills issued in this State by any corporation, partnership, or persons, which shall be exclusively devoted to the maintenance of public schools."

One-fifth of the revenue was a variable quantity; and hence the funds arising were uncertain. The poll-tax was not collected, there being no legislative enactment compelling its payment. In 1875 the number of actual voters was 201,046, while of the poll-tax only $73,481.80 were collected. The school fund, therefore, was estimated always largely in excess of what it was; still Supt. MCKLEROY's report shows that of a population embracing now, both white and colored of only 996,992, or, in round numbers, one million of inhabitants, that there were enumerated between 5 and 21 (the school age) 406,270, that there have been in the public

schools 145,797, or, in actual attendance, about 36 per cent. of the school population."

"To summarize," says Supt. McKleroy, "we have had in operation 2,610 schools for whites, with an attendance of 91,202 pupils; for colored children 1,288, with an attendance of 54,595 pupils."

These numbers show two things—first, that there is no lack upon the part of the people to avail themselves of the benefits of their schools; second, that the attendance at school is a fair proportion of the races—or that the provisions made for schools are sought and appreciated equally by both races.

With this encouraging estimate of the school population, 36 per cent of which are actually in the schools, yet we do *lack* proper appliances; we do *lack* suitable school-houses, school furniture and school apparatus; we do *lack* a sufficient number of well-trained teachers—teachers who have selected teaching through choice, and expect to follow it as a profession.

I have frequently said that teachers of the present day are divided into two classes. The first class teach in order to do something else; the second teach because they can do nothing else.

Neither are they to be wholly blamed for this. It grows out of the "*unwise economy*" spoken of by President Eliot—practiced by school authorities, sanctioned and endorsed by parents. But I have no fears as to the correction of all these evils. Our people have a desire and taste for education, and in due time they will provide all the needed appliances—well-trained, skilled teachers as well. Still, I am very far from admitting that our teachers are so far inferior to the teachers of other States in the work of teaching; for I am not quite a convert to the superior capacity of the Normal-School training. Having been engaged in conducting the Public Schools of the City of Montgomery, and being well acquainted with the operations and managements of the schools in Mobile, Selma, and other important towns, I feel that I am warranted in saying that in these schools is to be found the very best talent, the very best educated material—of the very best society in the State. Knowing what is doing in these schools, I know who are doing it; and it is through these as examples—model schools, that I hope to incite the rest of the State to do likewise.

In corroboration of this idea, I quote from a letter of Dr. Barnas Sears, the efficient agent of the Peabody Fund, to Supt. McKleroy, August 5, 1875:

"I agree with you that a few good schools in central places will do more for the growth of the system than many poor ones. We shall contribute to Alabama about as in former years, if the encouragements are the same. If your schools come fully up to the work as is done in other States, we may go as far as eight or ten thousand dollars." And he further adds: "It is best for all the States to be helped just when they are taking hold of the schools in good earnest. We aid most those who help themselves most." To the schools in Montgomery alone, Dr. Sears contributed $2,000; conclusive evidence that in Montgomery the schools "are helping themselves."

What has been said under this head, has reference entirely to the Primary Schools, and these purely *free* public schools.

In 1872 Alabama inaugurated her Agricultural and Mechanical College, located at Auburn; also *three* Normal Schools, one for whites, and two for the education of colored teachers. I have offered abstracts from the very able report of President TICHENOR, made to the President of the Board, 1874. I select from this report because it embraces the last year of my connection with the College.

The Agricultural Department at Washington gives, in its last report, full information in regard to the A. & M. Colleges in the United States. From that report it appears that the whole number of such Colleges is forty; their aggregate property is $17,535,475; the whole number of Professors is 389, and the whole number of students 3,917.

In comparison with the general average of these forty Colleges Alabama stands as follows:

Average property	$438,387
Property of A. & M. College of Alabama	327,500
Or less than the average by	$111,287
Average number of Professors	9¾
Number of A. & M. College of Alabama	7
Average number of students	98
Number in A. & M. College of Alabama	108

The Committee of Congress on Education and Labor addressed, last winter, a full list of questions to all the A. & M. Colleges of the United States, designed to elicit information on every important point connected with their organization and history. These questions *were fully answered by us in every particular*, while many of the Colleges of other States failed to make full reports.

From the report of that Committee the following facts are collected, and comparison is made between the Colleges of four of the largest and wealthiest States of the Union—Massachusetts, New York, Pennsylvania, and Illinois, and our own.

The Colleges of these four States have acquired, and justly deserve, a national reputation.

There are several things which ought to be taken into consideration in making an estimate of the efficiency of these Colleges as compared with that of Alabama:

1. The age of the Institutions. This report was for the collegiate year 1873–4.

The Alabama College was organized in	1872
Those of Massachusetts and Illinois in	1867
Those of New York and Pennsylvania in	1866

2. The power of large endowments, splendid buildings and elegant equipments to attract students even from other States.

3. The differences in the size of the towns and cities where they are located, as large towns and cities may reasonably be supposed to furnish a heavy local patronage.

4. The fact that three of these Colleges admit females: thus New York had 8; Pennsylvania 24; Illinois 74 female students.

5. The difference in population and material prosperity of these States. They are all rich, powerful, and prosperous, while Alabama is impoverished—her people are struggling for bread.

With these facts before you, let the following comparison be carefully considered:

ACRES OF LAND RECEIVED BY STATES FOR ENDOWMENT OF THESE COLLEGES.

Massachusetts	360,000 acres
New York	990,090 "
Pennsylvania	780,000 "
Illinois	480,000 "
Alabama	240,000 "

MONEY RECEIVED FROM SALE OF LAND.

Massachusetts	$ 167,464 00
New York	1,973,403 00
Pennsylvania	439,186 00
Illinois	395,814 00
Alabama	216,000 00

INCOME EXPENDED FOR INSTRUCTION

Massachusetts	$18,551 or 48⅝ per cent
New York	60,592 or 30 " "
Pennsylvania	14,000 or 28⅞ " "
Illinois	26,114 or 20 " "
Alabama	13,557 or 58 " "

STUDENTS.

Massachusetts	139			
New York	519 of whom	8	were	females
Pennsylvania	150 "	" 24	"	"
Illinois	402 "	" 74	"	"
Alabama	108 "	" 00	"	"

The institutions in New York and Illinois are Universities. The number of students in the A. & M. Colleges of these universities is as follows:

New York	151
Illinois	161

RATIO OF STUDENTS TO INCOME OF COLLEGE.

Massachusetts	$1	for	every	$275
New York	1	"	"	400
Pennsylvania	1	"	"	332
Illinois	1	"	"	323
Alabama	1	"	"	253

RATIO OF STUDENTS TO WHITE POPULATION OF THE STATES.

Massachusetts	1	student	for every	10,382
New York	1	"	" "	8,343
Pennsylvania	1	"	" "	23,044
Illinois	1	"	" "	6,246
Alabama	1	"	" "	5,111

COST OF INSTRUCTION PER STUDENT.

Massachusetts	$247 00
New York	386 25
Pennsylvania	293 28
Illinois	325 00
Alabama	141 13

This is what it costs the *College* to furnish instruction to the student. The report of Committee gives no data from which we can estimate *the cost to the student* at these Colleges, but their catalogues show that the A. & M. College of Alabama is furnishing education at less cost to the student than the great majority of Colleges in the United States.

"Had we chosen to make the comparison with the Colleges of the weaker States, the results would have been much more favorable for us. We have selected the Colleges of the strongest States, having the largest endowments and national reputations to show that in proportion to means and facilities, whether we consider number of students, amount of work or economy of administration, we suffer nothing in comparison with them."

President Tichenor justly remarks that "they," meaning the States in which the Colleges are located, "are all rich, powerful, and prosperous, while Alabama is impoverished—her people are struggling for bread."

To justify this statement of the Doctor—to give some idea of the poverty of the State, I refer to but one of her staples—heretofore the main one, as given by the Census of 1860 and 1870.

Bales of cotton produced in 1860, 989,955. Bales produced in 1870, 429,-482—a loss of more than one-half.

The same decrease will be found in all other industries, and not only in Alabama, but for the entire Southern States.

From the report of President Rice of the Normal School at Florence for the instruction of white teachers, we find a flattering exhibit.

Says Dr. Rice:

"During the first year we matriculated 97 students; the second year, 126, and the third year [the year of his report] we have entered with prospects perhaps equally or more flattering than heretofore."

From the Normal School at Marion for Colored Teachers, Hon. John Moore, President of the Board of Trust, writes:

"The number of students in attendance at present is 70, according to Professor CARD's report to me; and Professor C. reports that *thirty* of the students of the previous year are actually engaged in teaching the Public Schools, and that the demand for well-qualified colored teachers is much greater than the supply." The State Normal School, at Huntsville, also for colored teachers, has this year 84 students in attendance.

In addition to these two particularly fostered by the State—the Swayne School, at Montgomery—Emmerson, at Mobile—and Burrell, at Selma, for the education of colored teachers, are all reported as doing good work—and are rapidly furnishing well-disciplined and well-prepared teachers of their own race for their own schools.

I think it appropriate here to quote what Professar J. L. M. CURRY,

LL.D., of Richmond College, Virginia, said on the subject of Public Schools in the South, at the National Baptist Educational Convention held at Brooklyn (N. Y.) in April, 1870.

"Prior to the war no general system of common schools existed in all the States. Alabama had a system gradually perfecting and growing into completeness. Various towns and cities had free schools, in more or less successful operation. Academies and Colleges for boys were abundant, and of a high order.

"The war suspended all the institutions of learning, and when we emerged we gained consciousness, it was to discover the dissected members of our extinguished civilization, floating hither and thither without direction."

"A re-construction of our material, mental, and moral interests became necessary. Schools and Colleges were opened. More enthusiasm in the cause of education exists now at the South than ever before.

"In this awakened sense of the necessity of a high and universal education both races are included. The colored people as citizens and wards of the nation, need to be qualified for their exalted responsibilities. Especially do they need trained and educated teachers of their own race.

"If practicable, a degraded race should be elevated and delivered by their own class, as the patronage of the superior has a tendency to degrade character."

I know of no State, South, with so small a population that has done more to educate, to enlighten and advance her youth, whether white or colored, than the State of Alabama. And I think her history, educationally, since 1866, fully justifies the remarks of Dr. CURRY, and establishes my position.

As Mobile City (embracing the County) has a system of schools distinct from the State System, it is necessary that I speak of them separately—There schools have been in operation for *twenty-four* years, and will compare favorably with the very best schools in the Union.

I here quote the cost of education in the leading cities of the States; and according to report of Superintendent Dickson:

"It costs in Mobile less than $13 for each pupil—this includes all expenses whatever, and these schools continue 9 months."

"In Atlanta, Ga., it costs for each pupil $18.29; in Savannah, Ga., $18.-35; in Springfield, Ill., $17.60; Louisville, Ky., $23,13; Vicksburgh, Miss., $17.93; St. Louis, Mo., $21.58; Richmond, Va., $15.88; Petersburgh, Va. $15.86; Alexandria, Va., $16.65, and Staunton, Va., $19.00."

Superintendent DICKSON adds, that the number of pupils to the teacher is unusually large, and also regrets the *lack* of suitable buildings as well as an insufficiency in number, but he nowhere, or at any time speaks of the want of ability or efficiency in his teachers. The reason for this is obvious—the present teachers of the Mobile schools were the pupils of the Mobile schools.

In a report to the Board of School Commissioners of the city of Montgomery made at the close of the past session, I showed if the capacity of our Buildings could be doubled, our number of pupils could at once be doubled, while the cost of the actual teaching of a pupil would be reduced

to $12.00 for 9 months, add to this say 15 per cent for incidentals and we should have as costs for a pupil $13.80.

This comparison, while it shows that the costs of educating a pupil in Mobile, and also in Montgomery are less than in the older States, is intended not to show the superiority of our schools, but rather the overcrowded condition of our school-houses and the consequent *lack* of thorough teaching. And while this increase in the building capacity would afford school facilities for the entire school population, out of the Private Schools, for the reason that it would overwork the teachers, at present it would not be judicious.

This brings me really to the present status of the Public Schools in Alabama as will appear in the forthcoming report of Superintendent McKleroy, for the year 1876, and which will be issued December next.

This brings me to the first year of operation under the new organic law —the constitution of 1875—the will of the Convention—the voice of the people of Alabama, as expressed in Art. XI on Education, which is decided and unmistakable.

"Sec. 1. The General Assembly shall establish, organize, and maintain a system of public schools throughout the State, for the equal benefit of the children thereof, between the ages of seven and twenty-one years; but separate schools shall be provided for the children of citizens of African descent.

Sec. 2. The principal of all funds arising from the sale or other disposition of lands or other property, which has been or may hereafter be granted or entrusted to this State, or given by the United States, for educational purposes, shall be preserved inviolate and undiminished; and the income arising therefrom shall be faithfully applied to the specific objects of the original grants or appropriations.

Sec. 3. All lands or other property given by individuals or appropriated by the State for educational purposes and all estates of deceased persons who die without leaving a will or heir, shall be faithfully applied to the maintenance of the public schools.

Sec. 4. The General Assembly shall also provide for the levying and collection of an annual poll-tax, not to exceed one dollar and fifty cents on each poll, which shall be applied to the support of the public schools in the counties in which it is levied and collected.

Sec. 5. The income arising from the sixteenth-section trust fund, the surplus revenue fund, until it is called for by the U. S. Government, and the funds enumerated in sections three and four of this article, with such other moneys to be not less than one hundred thousand dollars per annum as the General Assembly shall provide by taxation or otherwise shall be applied to the support and maintenance of the public schools, and it shall be the duty of the General Assembly to increase, from time to time, the public-school fund, as the condition of the treasury and the resources of the State will admit."

For the certain collection of the poll-tax, the Legislature at its last term passed a law, and *provided* that the tax so arising should be distributed among the schools of the respective counties in the proportion of the polls—the poll-tax of the whites going to their schools, and the poll-tax of

the colored going to their schools. This distribution was agreed upon from a knowledge of the wishes of the parties paying the tax, as expressed by their representatives in the General Assembly, the colored members voting for this distribution unanimously.

This will insure from poll-tax	$300,000
Appropriation by Legislature	150,000
Interest on 16th-Section Fund (variable)	75,000
Total	$525,000

For 1877 we may safely rely on an appropriation of $200,000, an increase of $50,000 from the Legislative appropriation, and a tax on dogs, which will add $250,000 more, making in the aggregate $825,000; and to this add an item which is much more potent than Legislative enactments and constitutional provisions—the influence of these schools and the enlightened view of each succeeding year, and I see no reason to fear for a moment as to the support and success of the free public-school system in Alabama. I know it has been the work of political factions to decry and to misrepresent the true status of the people on this subject; hence, at some length, and rather in detail, I have set forth the facts with regard to the schools, believing that the facts are the best and safest advocates of the schools.

Before closing this part of this subject, I desire to revert again to the State University. For any public-school system a State University must be the grand central luminary, shedding at all times its influence over the rest of the system, not claiming any superiority over the other institutions, but as a head and model for the others, inciting them in their peculiar spheres to be worthy of the highest consideration.

Up to the war the popularity and usefulness of the University won the respect and confidence of the entire State, besides numbering among its students and alumni the young men of other and adjoining States.

During the war all the buildings, except some of the professors' houses, were burned by the Federal army. In the conflagration was consumed a large and well-selected library, together with the entire chemical and philosophical apparatus.

Since the war the buildings have been partially replaced by the State, and the apparatus restored to some extent. The last session—the forty-fifth—the most prosperous since the war, has just closed. In this Institution I have never had any personal interest—rather otherwise, having served in a rival college—but I desire here to enter my earnest prayer, that as it originally was the result of Federal munificence; that as it lost its splendid buildings and costly library at the hands of Federal officers, that it may be restored by the magnanimity and generosity of our common and free Republic, for the cause of education; for the noble young men of a young and struggling State.

The alumni of this University are to be found in all the walks of life—in the councils of the State; in the forum; in the halls of Congress; and whether in private or public, they alike adorn every station in which they are called to labor; and the restoration of this, their Alma Mater, to her *pristine* power, and her former position of usefulness, and that by OUR

GENERAL GOVERNMENT, would awaken in their common heart a common sympathy with, and gratitude towards, our common country!

[We omit from this paper that portion, occupying about nine printed pages, which relates to the mineral resources, manufacturing advantages, railway system, and vital statistics, of Alabama. The pages are, however, given, in full, in the copies (1000) of the paper printed for the author.]

The great Industrial Problem to be solved by our statesmen—our educators, is this: How can we make the most of our natural resources which, however varied and vast, are but the basis of our wealth? How can we manage to consume in home industries the larger part of our raw material, adding to its value by the magic touch of taste and skill? This problem cannot be solved by "protection," neither by "free-trade"—not by the politicians at all; it can only be solved by the teachers—by education for definite industrial purposes and directed by reason and experience.

This education can be imparted. That art which gives form and decoration a commercial value can be taught—should be taught.

Where shall it be taught? The work should commence in the schools, whether Private or Public, and be continued through the Higher Institutions, specially designed and equipped for the purpose.

And this education in its elements must aim to develope in the whole people, "the how" to do, more than "the why" it is done. I will name only one branch in addition to those already generally taught in the schools. Drawing, I think, should form an integral and separate department in all our education; it will afford both culture and amusement for children, enabling them to entertain themselves with the creation of their own fancy—disciplining and educating the hand to convey to the eye the conceptions of the mind.

Drawing is a universal language—lines and forms are the same in all countries and in all climes. The artisan of France can execute the design of an American artist with as much facility as had it been devised by the cunning hand of one speaking his own vernacular. Hence we find the diagrams of all mathematical and other scientific works the same, regardless of the language of the text.

Drawing is the perfection of illustration, even of our thoughts. Parables are word-drawing, and hence the frequent and successful use by the Greatest of all Teachers.

The elements of all Sciences should also be taught in the schools, beginning, it is true, higher up, or in the more advanced classes. But upon the bare mention of this suggestion, the question comes up from the Conservative—*Laissez-faire* side of the discussion—where will you find time for the introduction of these new sciences and these new arts? I answer—by not attempting everything. Do not aim at any more in the primary schools nor in the higher institutions than just what is necessary, assured that whatever secures practical knowledge, secures mental discipline as well. See if we cannot reduce the time now devoted to arithmetic *one-third* of the whole time devoted to school duty, by one-half? See if the

number of Primaries and Intellectuals, and High-School Arithmetics cannot be reduced from *four*, oftener six, volumes to two? Banish from the school-room entirely what is called English Grammar; the analysis of analyses, with its efforts to *manufacture* language, rather than to record the language as it is. See if the number of "Word-Books," whose name now is legion, cannot also be reduced, even though it injure, to some extent, the craftsmen who make "silver shrines for Diana." Then we shall have more time—plenty of time—to introduce, and that, too, into the schools, practical, useful and delightsome studies.

Said MONTECUCULI: "If you are preparing for war and wish to become victors, you must have three necessary things; first, money; secondly more money; thirdly, much more money." We *need now*, that broad and white-winged *peace* has returned to our torn and devastated country, that which will bring PROSPERITY. We, too, need in this bloodless, yet hotly-contested conflict—well-drilled, well-trained workmen. To accomplish this we need three very necessary things; first, *industrial education;* secondly, *more* INDUSTRIAL EDUCATION; thirdly, *much* MORE INDUSTRIAL EDUCATION. We lack the education which produces "producers." The old education, the old institutions, have produced simply "consumers." Its purpose is solely to prepare young men for the learned professions—Doctors of Medicine, Doctors of Law, or Doctors of Divinity. And I wish here to say, that I neither undervalue nor desire to disparage these —they were necessary; they are necessary;—I would not, if I could, "unsphere Plato," rob Neptune of his Trident, or break the magic spell of Jove's thunder-bolts; I only plead in this great system of education for a *division* of the labor; knowing here particularly that harmony is the strength and chief support of both.

Great Britain has the honor of being the first to challenge the world to a comparison of industrial products, and in 1851 held the first universal exhibition at London. The result is known by every one; as to products involving tastes, that which adds market value, she found herself far below all her European rivals, and above the United States alone.

Still, she is very far in advance of the United States, as will appear upon a simple comparison: In 1870, the total cotton manufactures of England amounted to $447,096,000, while the value of the raw material consumed was but $202,296,000; and so the sum of $224,800,000 was added by the process of manufacture. For the same year the total value of cotton manufactures in the United States was $177,489,739, while the value of materials consumed was $111,736,936; of which, about $100,000,000 can be set down to raw cotton. That is, that while the value added by manufacture in England is considerably more than the raw cotton consumed, in the United States, it is considerably less, and this, too, though raw cotton costs more in England than it does here, and though the same quality of labor is cheaper there than with us.

A comparison of wool manufactures will show the same; and the question is: how does England manage to carry the price of her cotton and woolen goods above ours? Simply by putting more skill and taste in them.

Of products requiring skilled and highly-skilled labor as compared with

those produced by rude labor, Switzerland furnishes the most striking contrast.

Switzerland, in 1873, according to the American Consul at Basle, sent to this country watches valued at $2,520,104. The same year she sent, embroidery to the amount of $2,095,234.

Also the same year, from the same country we imported silk and silk goods to the amount of $5,224,016. To pay for these three articles alone, amounting in the aggregate to $9,839,454 in gold—not in currency—would have required, say in Montgomery, the capital of Alabama, in her favorite staple 79,000,000 lbs. or 178,000 bales of cotton, although the average price that year was higher than now, being fourteen cents per lb.

According to the values of raw material as compared with the manufactured articles in England, had this cotton been manufactured in Montgomery it would have swelled the amount to 360,000 bales, or in currency it would have reached $22,428,000, or there would have been for distribution among the skilled and highly-skilled of our industrial classes $11,-214,000, after paying for these three small articles of import, watches, embroidery, and silk, from little Switzerland.

Notice how coolly Mr. J. Scott Russell, in his book entitled: "Systematic Technical Education of the English people," speaks of the market value of labor:

"What is, then, the mercantile, or moneyed value of a well-trained, skilful Englishman, as compared to a strong, able-bodied man who understands no craft, handiwork, or art? The shop-value of the two men is at once told by the labor-market. The one man can earn for the community twenty-five pounds a year; the other man has an average of sixty pounds, and with superior skill, a hundred pounds a year. Or if we take the three grades of unskilled, moderately-skilled, and highly-skilled men, we may represent their mean values by twenty-five pounds, fifty pounds, and seventy-five pounds; in other words, the highly-skilled man is worth three times the value of the unskilled man."

Another quotation from this distinguished authority, bearing directly upon this subject, may be pardoned. It is a deserved compliment from England to the art-industry of the Continent. I introduce it, too, because it bears particularly upon one of our greatest and most essential enterprises—our railroad construction and equipments. With singular clearness it at once sets forth the most marked results with their solution:

"It is notorious that those foreign railways which have been made by themselves in the educated countries of Germany and Switzerland have been made far cheaper than those constructed by us in England; it is known that they have been made by pupils of the industrial schools and technical colleges of these countries; and I know many of their distinguished men who take pride in saying that they owe their positions entirely to their technical schools. I find everywhere throughout their works marks of that method, order, symmetry, and absence of waste, which arise from plans well thought out, the judicious applications of principles, conscientious parsimony, and a high feeling of professional responsibility. In the the accurate cutting of their slopes and embankments, in the careful design and thoughtful execution of their beautiful, but economical stone-masonry,

in the self-denying economy of their large-span bridges, the experienced traveller can read as he travels the work of a superiorly-educated class of men; and when we come down to details, to the construction of permanent way, arrangements of signals, points and sidings, and the endless details of stations, we everywhere feel that we are in the hands of men who have spared no pains, and who have applied high professional skill to minute details."

Such is the testimony of the builder of the Great Eastern, a man whose powers of conception and design are equaled only by his powers to execute.

Happily, we have our railroads, and whether economically or artistically constructed, we shall need these, and more too; but that which we most need in Alabama—in the entire South—is that which will create a demand for transportation.

Our coal still slumbers in the bosom of mother-earth, our water-power continues its eternal circuit from vapor to water, and from water to vapor; from heaven to earth—from earth to heaven.

These await but the bidding touch of art to do their willing service; and the day when these shall be called forth to take their part in this great and grand industrial conflict, a new era will dawn upon the South. Then will the managers of our railroads, of our factories, of our agricultural and mining industries, boast that they were educated at our technical schools. Our teachers and school officers, that they were trained at our Normal schools and University.

Then will Alabama, clothed with the results of the development of her own natural resources, proudly move forward in the triumphant march of prosperity, not only as *seventh* State in point of wealth, but among the very first in point of education, and refinement in our free, peaceful, and happy Republic.

NOTE.—It has been customary to publish the Constitution, List of Members, Treasurer's Report, etc., immediately after the proceedings of the General Association. The Treasurer's accounts were handed to a member of the Auditing Committee for examination, and they have not as yet, Oct. 28th, been returned to the Treasurer. This fact compels the Publishing Committee to defer the printing of the report, with the other things mentioned above, to the last of the volume.

DEPARTMENT OF HIGHER INSTRUCTION.

First Day's Proceedings.

MONDAY, JULY 10, 1876.

The Department met at 2 P. M., in the Concert-Room of the Academy of Music. In the absence of the President, Prof. PORTER, of Yale, and the Vice-President, Prof. VENABLE, of the University of Va., Prof. D. C. GILMAN, LL. D., of Johns-Hopkins University, was requested to preside. The exercises of the Department opened by Prof. W. J. RIVERS, of Washington College, Md., who read

"A NOTICE OF THE HISTORY OF THE SOUTH-CAROLINA COLLEGE."

In Provincial times our young gentlemen who desired a better education than could be obtained in the schools of their neighborhood, either went by tedious voyage to colleges in England or resorted to our older institutions in Massachusetts, Connecticut, New Jersey, and Virginia, which they reached, in some cases, by journeying long distances in coaches or on horseback. At the South, and no doubt in many sections of the North, the sons, chiefly of wealthy parents, enjoyed the advantages of collegiate education. But so soon as the provinces secured their independence, the necessity for a greater diffusion of such education, in order to prepare more thoroughly the youth of the country for important positions in the Republic, manifested itself in the founding of new colleges in many States where such institutions did not already exist. In the few charters which I have seen, not only this necessity is recognized, but also the necessity of rendering such institutions easily accessible.

The American army had not yet been disbanded when, in the spring of 1782, Maryland established her first college. Before the close of the century other colleges were founded in North Carolina, South Carolina, and Georgia, where none had existed before, and also in Maine, Vermont, New York, Pennsylvania, and elsewhere. In South Carolina the effort was made at first to establish four colleges in as many different places easy of access, in order to accommodate all the youth of the State. But through lack of means on the part of the people, these colleges were not efficiently sustained. Only one survived—the Charleston College—which has con-

ferred inestimable benefits upon the city in which it is situated. At length, in 1801, the Legislature determined to found the South Carolina College at Columbia, the centre of the State, "where all its youth may be educated," says the charter, and to "promote the instruction, the good order, and the harmony of the whole community." Eminent gentlemen were chosen as trustees, and a sure and liberal support was guaranteed from the State Treasury, the Governor, Lieutenant-Governor, President of the Senate, Speaker of the House of Representatives, and the Judges of the State were *ex-officio* members of the Board; and in conjunction with these, thirteen other prominent citizens were quadrennially elected by the Legislature.

A very important point in the organization of an institution of learning is the selection of its first President. He may—if he be the right man—secure for it at once respect and public confidence; and in systematizing its government may give tone to its subsequent administration. Permit me to say that however peculiar in political affairs South Carolina may have seemed to some of you, through misapprehension of her devotion to principles and to her convictions of the true relation of the State to the General Government—yet in matters of education her citizens have been, as perhaps you are aware, most liberal and cosmopolitan. When, for example, immediately before the late war they desired to inaugurate public schools in Charleston like those that are in successful operation in many of the Northern States, they selected Northern teachers experienced in such methods of teaching, and induced them, by the remuneration they offered to come and superintend their new schools. The same liberal spirit existed more than a half century ago. The first President of her College was a native of Massachusetts; under whose able administration for sixteen years the institution grew into consistency and stability. Her second President was an Englishman. Others have been supplied from Pennsylvania, Virginia, and Georgia. Indeed, more than half the Presidents and a large majority of the Professors have been other than natives of the State. Not that there was any lack of talents and acquirements at home—but the ambition of the people generally lay in other directions, and few of our gifted young men cared to devote themselves for life to the arduous duties of teaching. When I left home, in Charleston (where I had been at the school of a teacher from New Hampshire), and entered the South Carolina College at Columbia, I found that one of the professors was a German, another a native of New York, another of Connecticut, and another born in New York, but of New-Jersey parents. The students for whom these teachers were selected by the influential body of trustees already mentioned, were, in large part, sons of the *élite* of the State; of its Governors, Chancellors, and of all those old families whom some are pleased to call the aristocracy. The trustees looked solely to the qualifications of the professors for the duties to be performed; and perhaps to the advantages of a diversified experience in systems of instruction. I am led to remark that as modern civilization has been vastly benefited by the change from ancient national exclusiveness to free and extensi e State intercommunication—so educational bodies recognize now more than ever the advantages of mutual comparison in methods and

their results—from which we may indulge the hope that there will be finally evolved "the survival of the fittest."

The first Faculty of the South-Carolina College consisted of the Rev. Dr. JONATHAN MAXCY, a graduate and afterwards President of Brown University (R. I.), and subsequently President of Union College (N. Y). With him was associated—(and these two formed at first the whole Faculty)—Prof. HANSFORD of Connecticut, a graduate of Yale. Two other professors were soon added; one from Georgia, and another from Massachusetts, but a graduate of Dartmouth (N. H). To this exhibition of the liberal spirit of the State in matters of education, I must beg leave to add that South Carolina—until deprived, of late, of her own domination at home—has kept education distinct from politics; as she has likewise always kept religion distinct from politics.

From what has been said, it will be perceived that the older American colleges furnished models for the government, discipline, and curriculum of studies first adopted in the South-Carolina College. Latin, Greek, Mathematics, Logic, Moral and Mental Philosophy, Rhetoric, and the French Language formed the curriculum. But the requirements for graduation in 1804 were not much more extensive than the requirements for entrance to the junior class in the same College in 1840. Under the first President the culture had been characteristically philosophical and æsthetic. Under the second President, Dr. THOS. COOPER, special attention was directed to physical science. Educated at Oxford, England, and having been an associate of PRIESTLEY and a professor of chemistry and mineralogy in the University of Pennsylvania, Dr. COOPER brought with him an enthusiastic devotion to this department, and gave it prominence not only in the college but in the State. Unfortunately, after being many years President, he busied himself with infidel speculations, and on this account, notwithstanding his great learning and ability, brought the College to the brink of ruin.

On the re-organization in 1835, under President BARNWELL (subsequently U. S. Senator), there was established the department of "sacred literature and the evidences of Christianity," which was taught then by the late Bishop ELLIOTT of Georgia. This subject has ever since formed a regular part of the course of study. Excellent professors were chosen for chemistry (Dr. WM. H. ELLET), mathematics (Major TWISS of West Point), languages (J. W. STUART), Belles Lettres (HENRY JUNIUS NOTT), History and Politica Economy (Dr. FRANCIS LIEBER); while the President taught Moral and Political Philosophy and International Law. With these names and without further notice of professional changes, it may be well at once to mention the distinguished Presidents who followed Dr. BARNWELL, namely, Rev. Dr. HENRY, Hon. WM. C. PRESTON, and the Rev. Dr. THORNWELL (of whom biographical sketches may be found in a History of the College, by Dr. LA BORDE, a professor for thirty-three years). The College now attained its highest efficiency and popularity. The number of students increased to more than double the previous average. The buildings were improved and augmented in number, a new library and a commencement hall were erected, the chemical and philosophical apparatus and cabinet of minerals were rendered complete, an observatory was built, and supplied with prop-

er instruments, and the number of well-selected volumes in the Library, already amounting to about 25,000, was steadily enlarged by an annual appropriation from the Legislature.

But you may inquire of me, What were the characteristics of the College that gained for it such favor in the State? and what work did it perform in the cause of higher education?

1. In several respects the College was very important to the State apart from its educational work—so far as that work relates to the mental training and the acquisition of knowledge. In the first place the inhabitants of the upper section of the State were of different origin, as immigrants, from those on the seaboard. The latter being descendants of the first colonists, who had governed the whole province from Charleston, retained political preponderance even after the upper section of the State had increased to more than an equality with them in population. Hence there sprang up between the sections considerable antagonism, and even animosity. Although the causes of such a spirit were at length removed by amending the State Constitution, still the spirit itself did not altogether fade away till the centrally-situated College had brought the youth of the two sections into close association and friendship with each other. Furthermore, the upper section had been deficient in educational advantages till the College diffused over it an enlightening and elevating influence. If in nothing else, at least in these respects, the design of founding the College was eminently successful. Education throughout the State and the "harmony of the whole community" were permanently promoted. As a result, no State has had a population more unified, or political leaders more friendly with each other and more concordant in every great measure affecting the public welfare.

Another point of importance to all the people was the influence of the College in improving the standard of schools and academies. The prescribed course of preparation for entrance into the College was the standard up to which the schools brought their pupils. The entrance examination was strict; and rejection was considered a disgrace not only to the applicant but to his instructor. The principals of schools and academies sought the acquaintance of the professors, and were generally in correspondence with them Hence resulted that great good to the people—faithful schoolmasters.

One more point of importance we must notice—the influence of the College upon the formation of character. Within those walls no young man durst lie, or prevaricate, or deceive. If any one unembued with honorable principles happened to stray into the fold, and was guilty in this particular, the faculty had no need to take the case under advisement; but the students themselves instantly turned the offender out of College. Playfulness, mischief, serious disorders were rampant at times; but lying was so detested that the *voir dire* never failed as a disciplinary power. The trustees acknowledged and guarded the principle by defining in By-laws, the occasions to which, in ordinary discipline, the Faculty should restrict themselves in putting a student upon his word of honor. The high standard of character among the young men themselves rendered authority over them most effectual whenever we felt that our duty required us to

mention to them the word "gentleman." When a class had completed its course, and commencement came,—the wisdom, the learning, and the beauty, too, of the State, assembled, with the Governor, the Judges, and the dignitaries of the Legislature, in their official robes—to witness the impressive scene of a presentation, as it were, of a noble band of youths, from the College to the State, as her future law-makers and rulers, and defenders of her honor and her rights.

We perceive now why the people favored the college. But is it not strange that in this country we are indisposed to "let good enough alone?" The College was at its height of efficiency and usefulness, according to its means and circumstances, when Denominational Colleges began to spring up in the State. The Methodists thought it advisable to have their own institution of learning, the Baptists theirs, the Lutherans and others theirs. The old error of the State in attempting to found four colleges had been corrected in 1804, and all its favor and power concentrated upon one to render it most efficient. The people now reversed the movement and went back to the error again. Without building up a great College, they weakened and crippled the one which might have been made great in its museum and collection of books, in the completeness of its astronomical and experimental appliances, and in the eminence of its teachers. The same process of depreciating old and strictly-modelled institutions is in progress over all our country—multiplying and popularizing Colleges of every grade, till the Baccalaureate title is no sure index of the attainments it ought to indicate.

2. To the question what has the college done in the cause of higher education—we must answer, not a great deal with respect to the country at large—but a great deal at home. It spread throughout the State an appreciation of literary and scientific attainments; and it has sent from its halls a host of noble men; teachers and Professors, preachers and Bishops, legislators, orators, lawyers, and Judges, governors, senators in congress, cabinet officers and ministers to foreign courts. During its brief existence of two generations the College instructed at least 2950 young men, of these 1752 completed their baccalaureate examination. It is worthy of notice that a high estimate was placed upon qualifications for its honorary degrees. From 1804 to 1862, besides bestowing the title D. D. upon a small number of worthy recipients, that of LL. D. was given only to *nine*; and these were such as JOSEPH HENRY, WM. H. TRESCOTT, Rev. Dr. BACHMAN, and GESNER HARRISON. Indeed, the people of the State as well as their College have been so exacting as to reach almost the point of discouragement in their standard of excellence.

We have not been a book-producing people. The gentlemen of the State being occupied chiefly in agriculture and abounding in wealth, preferred the elegancies of social life and the acquirements by which it is adorned, rather than the exacting toil requisite for profound scholarship and literary fame. As, however, many aspired to the honors of eloquence and statesmanship, the college in response to such aspirations directed special attention to rhetoric and the study of the classics. Its excellence in these branches equalled—I may venture to say—that of any college in the country. Perchance to your ears may have come the names of a few

of our alumni—a LEGARÉ or PRESTON, McDUFFIE or THORNWELL, HAMMOND, MEMMINGER, MILES, or PETIGRU.—But the success of the College, as we have intimated, has not been marked by famous instances of individual pre-eminence, so much as by a wide-spread diffusion among all classes of the people, of respectable proficiency in science and literature. And as a measure of College work which of these results should we prefer? I must add with your indulgence, and even at the risk of appearing too partial—that notwithstanding South Carolina's neglect of literary reputation and book-making, yet if the occasional productions of those who have been connected with the College as teachers and students should be collected they would form a set of volumes which in erudition and elegance of composition might not fall very far behind in a comparison with a similar number of books produced under the influences of other American colleges.

In the last year of the College, *i. e.*, in 1862, there were 8 Professors. To convey to you a conception of the quality and extent of their work, I shall briefly mention the requirements for entrance (which were strictly enforced) and the curriculum of the Junior and Senior years. For entering the Freshman class were required a knowledge of the English, Greek, and Latin grammars, including Prosody; ancient and modern geography, arithmetic, a large portion of algebra; all of Sallust, Virgil (Georgics, Bucolics, and 6 books of the Æneid), 8 orations of Cicero, Arnold's Prose Composition; Kuhner's Greek Exercises as far as Syntax, Jacob's Greek Reader, six books of the Iliad and six of the Anabasis. The examinations for entrance were what are called written examinations. In the Junior and Senior years were studied portions of Cicero, Lucan, Horace, Plautus, and Terence; of Æschylus, Sophocles, Euripides, Pindar, Plato and Aristotle; Greek and Latin Composition (for the best original essays in which gold medals were awarded);—Trigonometry, Analytics, Calculus, Astronomy; a full course in Chemistry and Mechanical Philosophy; Moral and Mental Philosophy, Sacred Literature and Evidences of Christianity; Criticism, Elocution, English Literature, Logic, Rhetoric, and Political Philosophy. For faithfulness and thoroughness in the scientific branches I need only mention that the lecturers were Prof. VENABLE, now of the University of Virginia, and Doctors JOHN and JOSEPH LE CONTE, now of the University of California. A Board of Visitors from the State at large convened by appointment of the Trustees to consider, criticise, and report upon the final examinations. The Trustees in turn made their reports to the Legislature.

The late war destroyed the college. In 1862 the Confederate Congress called to arms the young men of sixteen years of age. The day upon which that call came—books were thrown aside—the halls deserted—the students gone! The buildings were soon afterwards taken by the Government for Hospital purposes. At the close of hostilities in '65, the State Treasury was empty; and the college was changed to a University system on a self-sustaining basis. This was done as a relief to the treasury, and as a means of affording partial courses of instruction to suit, at the time, the pressing needs of the youth of the State. With the same design a Law school and one of Modern languages were added, and a full Medical

Department was incorporated with the University. The number of Professors was increased to twelve; and ten separate schools were established on the plan of the University of Virginia. The State, as soon as it could, made liberal appropriations for the institution. A large body of young men sought the advantages offered,—many of them wounded, maimed, crippled,—but ardent to repair their loss of education occasioned by the imperious summons to military service. A noble work was before us; and in a few years much was accomplished. But the sudden extension of the franchise to the liberated Africans resulted in giving them in South Carolina a voting majority of 30,000 over the English-descended population. Under evil leadership, these ignorant new citizens have taken possession of all that belonged to the State, including the University. Three years ago the old professors resigned or were summarily dismissed. Strangers were put in their places, and the University—still so called—supported by heavy taxation, has become a training-school for negro boys; most of whom, I am informed, are paid from the treasury $20 per month for their attendance. (Reference is made to Acts of S. C. Legisl. 1875–6, p. 100.) I suppress any utterance of my own, and merely say with LIVY's mildness —*est plerumque fit, major pars meliorem vicit.*

A few words more before I take my seat. There were in the old South-Carolina College four valuable scholarships for poor young men; and thirty-two free-tuition scholarships were given by the State; and each of the two Literary Societies among the students, helped through college, by secret contributions, some one of their members needing such help. All this has passed away. Many a Carolinian who used to help others, has sons of his own whom he cannot now afford to send to college. The few words more which I desired to say are—to acknowledge in your presence the kindliness of an institution in Virginia (the Washington and Lee University), in offering the advantages of a scholarship to any youth recommended by the Columbia Academy, an excellent academy which the people there are striving to support for those practically shut out from the more spacious halls which their fathers built. And Union College, too, in New York, which furnished our first President, in 1804, has generously offered to the young gentlemen of South Carolina, four scholarships. Benefactions so nobly and courteously tendered—even if, from various circumstances, they may not have been accepted—claim a grateful acknowledgement in the presence of this honorable assemblage of Presidents and Professors.

The essay was listened to with marked attention, and was briefly commented upon by Prof. E. T. TAPPAN, LL. D., of Ohio, and by other gentlemen.

The Hon. H. A. M. HENDERSON, Superintendent of Public Instruction of Kentucky, then read a paper entitled

THE POLITICAL ECONOMY OF HIGHER AND TECHNICAL EDUCATION.

Cui bono? "Who will show us any good?" This is *the* question of this wealth-coveting age. "Will it pay? is the challenging query put to every enterprise inviting attention. The world no longer has a Dryad for the wood, but a lumber-hunter; no longer a Naiad for the murmur and sparkle of the blue-eyed fountain or the rippling stream, but the hydraulic ram and the turbine wheel; no longer a Neptune, rising from the yeasty wave in a dolphin-drawn shell-chariot, but the copper-bottomed clipper ship and the oak-ribbed and iron-braced steamer; no longer a Vulcan for the forge and anvil, but the compound blow-pipe and the trip-hammer; no longer a Mercury for a news-bearer, but the electric telegraph; no longer a Juno for the fields, but the buggy-plow and the machine reaper; no longer a Jupiter throned upon Olympian heights holding parliament with the gods, but a Wall-street broker parleying with the bulls and bears.

An impertinent foe once asked Iphicrates what *he* was, for he had neither javelin, bow, nor armor. Pointing to his army panoplied for war, he replied: "I am the man who commands these warriors." There is a utilitarian spirit which interrogates the sage in like mood of contempt. It beholds him without hammer, scales, saw, or plowshare, and tauntingly asks, "What is he fit for?" Crowned with judgment, girded with strength, may he not rejoin, "I am the man who commands them all."

When Æschylus drew a portraiture of ideal greatness, which, when displayed in the theatre, turned, in admiring gaze, all eyes upon Aristides, as the model before the artist's mind, he pictured a field deeply plowed and, therefore fertile in productions:

> Reaping in the mind the produce of a deep furrow.

A close investigation will reveal that the world's wealth is the product of deep culture, and that riches do not spring spontaneously from the ground.

It is a widespread opinion that original discovery is mostly the product of accident, while the history of the world's progress clearly demonstrates that ignorant men are not the representative discoverers and inventors. Was it a butcher that discovered the circulation of the blood? No, it was the reflecting anatomist, Harvey. Was it a strolling astrologer who revealed the system of the universe? Nay, it was the philosophic Copernicus—the scientific Newton. Look at the genealogy of great inventions and discoveries, and you can trace the steps of development as of the demonstration of a theorem. Take, for example, the history of chlorine and its uses. Its great wealth-producing agency is manifest in the art of bleaching cotton. This art was no mushroom growth. In 1785, Berthollet noticed that a watery solution of chlorine, as the gas itself, could annihilate vegetable colors. To help him to this observation was the previous discovery of chlorine itself by SCHEELE in 1774. In 1786, in Paris, BERTHOLLET exhibited the process to WATT, who, on his return to Scotland, experimented upon the suggestion, and succeeded in bleaching 1,500 yards of linen. It was introduced by Prof. COPELAND to the attention of the Aberdeen bleachers, and through the instrumentality of Dr. HENRY was adopted at Manches-

ter. Soon after it was perceived that the cloth was injured by chlorine, and the health of the operatives was impaired by the gas. BERTHOLLET, by adding potash, and HENRY by using lime, measurably obviated these difficulties. Perceiving these difficulties, Mr. TENNENT patented a saturated solution of chloride of lime, and substituted, finally, for this, the dry chloride of lime; and, in addition to the great commercial value of this bleaching agent, we have chloroform—the greatest of all anodynes. Witness, if you please, in this genealogy of chlorine, a line of nobles in a realm of science!

Indeed, almost every valuable discovery and invention is the result of the combined thought or experiments of many men. HIERO, of Alexandria, first suggested steam as a mechanical power. Centuries passed, and DE CAUS, by its elastic power, proposed to lift a column of water. Other periods intervened ere the Earl of Worcester wrote a description of a high-pressure engine. All this preceded the scrutiny of the properties of vapor. MORELAND, in 1763, formulated the numerical ratio in which water augments its volume when evaporated under the pressure of a single atmosphere. The means of creating a vacuum was in turn discerned by PEPIN, and then the discovery was applied to mechanical uses by NEWCOMEN and SAVOY. In 1763, NEWCOMEN's engine having been put into the hands of JAMES WATT for repair, he began with enthusiasm to study the powers of steam. It is curious to follow the processes of thought by which WATT reached his solution, and the improvements which succeeded. In 1769 he began to build his great engine. BLACK followed with his discoveries relating to latent heat. DALTON fell in showing the relations between the temperatures and the pressures of the water vapor throughout the scale of the thermometer. MARIOTTE disclosed the law by which the pressure of all vapors and gases augment in the ratio of their density at an accepted temperature. GAY-LUSSAC perceived that all vapors and gases take on the same increase of pressure for each degree of temperature. PORGNY and ARAGO add their experiments. Various improvements were made in the mechanical appliances by FITCH, FULTON, CORLISS, the STEPHENSONS, and others, one of the greatest contributions being made, it is true, by the observing power of an indolent apprentice boy, until at length, as the result of the united thoughts and experiments of many minds, we have the mighty engines of Manchester, the ocean steamships of the Clyde yards, and the locomotives of Taunton—the great wealth-aiding agents of this century's civilization;

> With which we sail, we weave, we till,
> And bore the everlasting hills,
> And span the seas.

Thus, by tracing the genesis of the steam-engine, we are enabled to perceive how the seed-thought of HIERO has produced in the growth of the centuries, a great harvest of wealth. The first steam-engine was employed at Manchester in 1790, and now it is stated there are, within a circuit of ten miles, in daily use, upward of 50,000 boilers, yielding a total force equal to the power of one million of horses; and the combined steam power of Great Britain is set down as equal to the manual labor of twice the number of males living on the globe.

It is folly to doubt the statement that higher education has been the foster-parent of the arts and sciences in their wealth-giving agency. The crowned intellects in the realm of philosophy, physiology, psychology, mechanics, and the fine arts, are the children of the college. To follow the ramifications and relations of any phenomenon requires the guiding star of disciplined mind—patient, organized, persevering meditation upon facts and principles. To observe the deflection of the magnetic needle was one thing, but to construct the mariner's compass was quite a superior achievement; to notice the magnifying power of a lens was one thing, but to level a telescope on the sky was to put it to high uses; to see the struggle of confined vapor to escape was one thing, but to harness steam as a burden-bearer was another thing; to gaze on and record the appearances of the stars necessitated no unusual thought, but to survey their splendid orbits and scan the law by which they swim the argent areas of space demanded mind disciplined by hard study and by long training.

The activity of our faculties in the measure of enjoyment. Nature widens before the advances of mind and takes on fresh forms of wonder to excite admiration and to compel awe. Even when the speculations of cultured reason do not yield any apparent physical good, every effort of the mind is developing and joy-giving. Grant that speculation is a shadow—by it THALES ascertained the height of a pyramid; contend, with ARISTOPHANES, that philosophy rides in the clouds—but if some one had not made them chariots eclipses would never have been calculated and almanacs made. Though speculative reason whirls in the wind, so is the earth hung on nothing; yet it warms at the hospitable fireside of the sun, and bears all its children upon her generous breast. A mathematician wrote upon the *finis* page of Milton's Paradise Lost: "It is very pretty, but it does not prove anything." But it *did prove something.* It proved the creative capacity of mind. It has proved a source of recurring pleasure, and lifted many an earth-weary spirit above the dull level of its pain to catch the vision and hear the song of a brighter and better land. It has proved an anchor-ground for our noble English tongue, and enriched the vocabulary of pulpit and parliamentary eloquence. PYTHAGORAS, when he hinted the theory of the universe, speculated, and twenty centuries covered his tomb with their debris ere NEWTON caught the ripened apple whose seed the Grecian sage planted. SENECA speculated when he hinted the existence of a new world, and COLUMBUS demonstrated that the speculative philosopher was a prophet.

Maps, charts, dial-plates, engines, and telegraphs were once mere ideas in the human mind, even as the universe was a thought of God before the sun shone or a star twinkled in space. Solstices, the ecliptic, and the equator are all imaginary, but they help us to a knowledge of the seasons and of the geography of the heavens and of the earth. Astronomy may be said to lack utilitarian value, but what of men who see in the rushing comet a plowshare of destruction, and a rain of meteors a sign of coming woes, and an eclipse an omen of annihilation? Ask the navigator whether the polar star is a mere spangle upon the robe of night! The history written by THUCYDIDES may be regarded as a mere grace of rhetoric; but it was the parent of DEMOSTHENEAN eloquence; and what of the oration on

the crown? Ask ÆSCHINES. Sir WALTER SCOTT may be regarded as a mere word-painter and fiction-monger, but his romances brought forth the historical books of THIERS and GUIZOT; and ask the French whether those works have any fruit in the politics of France. Who can trace the genesis of literature and of science to ultimate results? Great and ultimate ideas, sometimes merely the product of fancy, march at the lead of all civilization. "It was the ideal ACHILLES that made the actual heroes of Marathon and Granicus. In the Anglo-Saxon race, from the days of ALFRED until now, men of superior genius, the original thinkers in each successive generation, have given birth to ennobling thoughts which continue to endure, and are perpetuated not only in the language, but the race itself. We are what preceding generations have made us. Englishmen and Americans of the present day are living exponents of the thoughts and truths elaborated by the illustrious dead." The results of higher education cannot always be weighed, but neither can gravitation, and gravitation is weight itself. Culture, by broadening the intellect, assists to a fit estimate of the aims and ends of virtuous life; by affording themes of pleasing thought it allays the heat of anger and of passion, rebukes a fretful anxiety, and, by its sublimating and joy-giving entertainments, abates or removes the *ennui* of existence, and soothes the spirit when smitten by the rod of adversity; it refines the sensibilities, cultivates the taste, prepares for rational pleasures, and, thereby, causes a protesting disgust of denobling pursuits and licentious appetites and desires.

Ah, is there not a soul-wealth more to be coveted than silver or gold—a higher communion than that which springs up in the market-place! The mere money-monger has no conception of the ravished mood in which NEWTON approached the solution of his great problem of the Cosmos; or in which COPERNICUS, with the measuring rod of mathematics, marshalled worlds into order, and mapped their mighty paths; or in which COLERIDGE'S heart "leaped up" when he beheld "a rainbow in the sky." Higher education, while productive of material wealth, transcends in purpose a mere worldly, craven, pig-iron philosophy, and though it respects the earth and harnesses its draft-horses, it also mounts upon wings, like eagles, and cuts a path through the starry zodiac. When a man has ascended the ladder whose foot rests on the earth, and whose topmost round leans on a star, though every intervening rung should slip from its socket, he would retain his altitude and yet be not dizzy at the depths beneath, nor dazed at the sunny heights above. Learning lifts the mind into the ether region of the imagination and to the starry summits of taste and reason, and, though the ascending may not be traceable, its devotee lingers, the enraptured beholder of revolving and glittering constellations.

I propose some illustrations of the worth of higher education. Look at its influence upon nations. See America as it was when the foot of the discoverer was first planted upon her shores, and now, after three centuries and a half of civilized culture has been expended in the transformation of the wilderness into the garden of God. The savages were ignorant of the fundamental principles of science, and had not even generalized the most familiar facts. A transatlantic race, guided by the magnetic

needle, the product of scientific observation, ferried the ocean, levelled the forests, and drove the plowshare of civilized husbandry through the fields fallow since the flood, and built towns and cities with the designing power of schooled architects and skilled artisans, and, to-day, the wealth of the west of the world is largely the product of educated intellect. Had the native barbarians remained in undisturbed possession of the continent, what would have been the condition of the soil, the mines, the quarries, the rivers, the woods, and the harbors at this hour? Though the aborigines have been in contact with white civilization three and a half centuries, they have shut their minds to truth, and been compelled to retreat before the march of culture. The Indian is becoming extinct simply because he would not progress. Had he absorbed the spirit of civilization, and imitated the invader's genius, he would still be a lord of the soil and a powerful factor in the great Republic, instead of an abject pensioner upon its bounty. Stagnation, wherever found, means final death to every living thing. Every race that locks itself up in exclusiveness and refuses to be taught is degenerating. China and Japan must adopt the advances of the occidental mind and apply its inventions to their husbandry and mechanic arts, and its political economy to their internal trade and foreign commerce, and its engines to their warfare, or they will become menial to the cultured race, and gradually fade, as the Indian, from the earth. The difference between the barbarian and the scientific man is almost as perceptible as that between different orders of being. The fact is patent to observation, now, that wherever among the savage races, the civilization produced by science goes, a transformation of marvellous potency is produced. Every steamer that goes from an enlightened to a savage port is a missionary of science, carrying the agents that substitute the star-reading telescope for the superstitions of astrology, the compass-guided helm of the ocean navigator for the rude paddle of the coasting canoe; the polished steel share of productive husbandry for the rude beam of the primitive plow; the cotton-gin, the spinning-jenny and the steam loom for the wood and bone needles with which the fibrous bark of trees was knit into coarsest fabrics; the cylinder press for the rude hieroglyphics upon beech trees and rock tablets; the keen-edged axe for the stone tomahawk; the buhr mill-stone and the turbine wheel for the rude pestle and mortar; the coal of the mine for the peat of the bog—made possible for hearth and furnace by the protection afforded by the safety lamp; olefiant gas for fish oils and pine-knots; the Composite column and the Corinthian entablature for the pole, fork, and thatch of the wigwam; the electric telegraph for the hill-top bonfire; the rushing railway train for the relay; the sumptuous banquets, that tempt the taste to a luxurious surfeit, for the coarse diet afforded by the chase and forest forage; the macadamized thoroughfare for the blazed path; the rifle and Parrot gun for the cross-bow; the marble-finished paper for the papyrus—in fine, mind and the products of its high culture for ignorance and an animalism that is content when well fed and groomed. Van der Kemp, the African missionary, learned the trade of a brick-maker that he might improve the dwellings of the Hottentots. He knew that it was difficult to live with a clean heart in a filthy hut. The Christian missionaries have acted wisely by

carrying with them the useful arts which render godliness profitable unto all things. The boys and girls in the South-African mission schools are taught to weave and spin. In the South Seas the missionaries have taught the people smith's and wright's work, to build ships and make sugar, to print and plant. The Hottentots, erewhile the most bestial of the race, are now respectable farmers and artificers. Some of the great laws which science has applied to the production of wealth were totally unknown to the ancients. The Roman and Grecian aqueducts are monumental attestants of their ignorance of the simplest laws of hydrostatics. Had they known what we know and practice, Athens, Rome, and other great capitals of classic civilization, could, at a tithe of the cost, have secured their water supply. And they were equally ignorant in many of the practical arts of mechanics. Water, now known to be the cheapest and steadiest power, does not seem to have been used by them, even to the turning of a mill-wheel, until as late as the age of AUGUSTUS. Up to the sixteenth century the saw was exclusively propelled by hand. The pump was a stranger to all the nations of antiquity. It seemed never to have entered the medical mind of the ancients to investigate by dissection the human frame.

These illustrations might be extended almost indefinitely. They clearly show the wealth-producing power of the suggestive, inventive intellect of science. Uneducated races have none of the conveniences and comforts of life. Civilized people only truly inherit the earth. The ownership and use of labor-saving machines, the magnificence of architecture, the rapid means of transit, the elegances of home life, are only found among people who are educated. Just in the ratio of ignorance do these things fail to appear. Wealth has been defined to be "the capacity to gratify desire." The savage may feel rich when a ham of venison and a hoard of nuts constitute his commissariat. He may feel secure against future want in the possession of a bow and a few arrows, and challenge the weather if sheltered by a roof of bark. But his desires are very low in nature and simple in their sources of supply. Unquestionably, as you cultivate an individual you increase his desires. Tasteful architecture, rich plate and viands, music, painting and sculpture, are only possible to a high cultivation. Educated taste, desiring these and kindred elements for its gratification, creates the conditions of demand, and educated genius, finding encouragement by the existence of a market for its products, struggles for excellency in furnishing an adequate supply. Thus the æsthetic desires of the purchaser are gratified, and thus architects, artists, and caterers find a field for the remunerative employment of their genius and skill, and, in turn, are furnished with the means, as the product of their taste and talent, to meet their own desires. The wants of man in a state of nature are few. Cultivate men, and you augment desires. The multiplicity of human wants are met by a multiplicity of employments. The benefit is to every member of the body-politic.

Higher education produces disciplined powers. It includes a trained employment of all the reasoning faculties—particularly of the observing powers. It encourages a broad generalization and a close induction. By it the phenomena of the natural world is scrutinized with an acute eye

and an inquiring gaze. The result is a discovery of the forces of nature, and their application to the useful ends of life. Besides the direct benefits of about $500,000 per annum to the Turkish government by Prof. J. LAWRENCE SMITH's discovery of emery in Asia Minor, he at once reduced the price of that article to one-third its previous cost, extended vastly its uses, all industries dependent upon it were increased, and now, in America alone, about three times as much of it is used as was in the whole world before. A paper presented by this scientist to the Academy of Sciences at Paris in 1850 pointed directly to the subsequent discovery of emery in Massachusetts, a treasure that might have remained hidden to the present day without his scientific deductions.

While preparing this address I had before me "The Century's Progress in Industrial Chemistry," a lecture by our distinguished fellow-citizen of Kentucky, Prof. J. LAWRENCE SMITH, of whom I am prouder than of any other citizen of our State. In that pamphlet I find a detail of the economic value of oxygen, chlorine, sulphuric acid, bisulphide of carbon, soda, potash, cyanide of potassium, oxalic acid, soluble silicate, stearic acid, glycerine, nitro-glycerine, gun cotton, phosphorus, iodine, bromine, sodium, aluminum, magnesium, (and varions medicines too) produced by the chemical art. I find the industrial arts indebted to chemistry to be mining, metallurgy, weaving, paper-making, glass-making, painting, photography, galvanoplasty, gilding, electroplating, dyeing, vulcanizing India rubber, candle making, etc. You may laugh at the turbaned experimenter with his miniature forge, compound blow-pipe and retort, but you would wonder and admire could you see aggregated the wealth the studies and trials of the laboratory have produced.

In France alone the yearly worth of chemical products is over $250,000,000, of which $125,000,000 represent the articles of sulphuric acid, soda, soap, India rubber, and candles. Regard the wealth produced by coal, gas, and aniline dyes—these latter, alone, representing an annual money value of $10,000,000. A scrutiny of the commercial value of chemistry in any of its varied departments will result in a similar startling exhibit.

To cultivate a mind is to make it a *possible* wealth-producer. A falling apple put a NEWTON's mind upon the track to discover the laws that bind the universe together, and the power which turns round every axle in the wheel-work of creation. The steam escaping from a tea-kettle put the inquisitive intellect of WATT on the path of experiment which led to the application of this powerful agent, as a motor, to the practical arts of life. What mighty results—what untold sums of wealth have come from the reflecting powers of these men's minds! The harvest of the orchards might have gone on for ages, and the steam kettles hissed and sputtered in a thousand kitchens, without yielding a useful suggestion, had the eye of the sage not followed the falling apple, or watched, with curious gaze, the plume of steam. The yeoman may smile at the philosopher's simplicity as he questions that falling apple, and the kitchen maid laugh to scorn the gowned and slippered experimenter with steam; but every star proclaims the glory of the one, and every rushing railroad train and iron steamship monuments the fame of the other.

The freedom of a country hinges upon its intelligence. Go to a country

populated with ignorance, and there you find despotism riveting its chains upon the limbs of its serfs and villeins. Ascend the scale of society and you find that the manacles are loosened as the light is augmented. Educate a people, and they will rise and shake the crown and sceptre from the brow and grasp of despotism, like the lordly lion the dew of the morning from his mane. Rejecting royal prerogative, they will claim the boon and assert the birthright of freedom. Look at Spain: a land of sunny slopes and silvery streams, of genial winters and zephyr-fanned summers, of silken raiment and orange groves; yet, a land whose history is red-lettered with the cruelties of the inquisition, and which is now cursed with priestcraft, bead-counters, and bull-fighters. Regard her mind. It is fanciful, capricious, somber, indolent. She has no railroads, steamboats, telegraphs, and scarcely a printing-press. Her knighthood is so degenerate that DON QUIXOTE and his good 'squire were valiant beside her caitiff cavaliers. Compare it with the United States. Can we not discover at a glance that the superiority of our country is accounted for by its intelligence and a free activity which is born of it? Give Spain a cultivated intellect, and she would build light-houses upon her coasts, checker her territory with railways, and rapidly regain that power which once made her mighty among the nations of the earth. With her present debased intellect she is fit only for brutality and bull-fights and the pronunciamentos of capricious tyrants and the raids of merciless banditti.

We are profoundly interested in the freest and fullest education of the masses. When our system is further developed, in my opinion an extended curriculum in the natural sciences should be introduced into our common schools. It is not by the culture of a few minds that we are to look for the widest wealth-producing agencies from education. Give every man a liberal education—and thus put him on the track to observe physical phenomena and discover material resources—and we multiply the agents capable of introducing reforms into politics, a thorough system of ethics into popular morals, improvements of existing methods in mechanics, and inventions, and discoveries that will result in new applications to the money-making arts and a widening use for the great forces, crystallizations, and growths of the natural world. Education must not be a mere fountain, sending up a central jet or bouquet of jets for the mere adornment of the parks and parterres of the mind, but as the refreshing showers floated over and rained upon the thirsty earth from every cloud that sails the horizon of intellect. If the cost of educating a man be compared with the money value of cultured intellect, statistics will demonstrate, substantiated from a variety of sources, that nothing pays a larger dividend in return for public investment and enterprise than a wide-spread education of the masses. Thus an educated stage-driver, accustomed to observe celestial phenomena, out at night upon the road when professional sages are lost in sleep, might be able to contribute, as the result of his observation, many facts that would assist to that broad generalization from which accepted and accredited principles are scientifically formulated. Many a man goes to an obscure grave unwept, unhonored, and unsung, blindfold to phenomena he might have witnessed with an inquiring gaze, had his mind been inducted into a knowledge of the principles of scientific gen-

eralization and induction. Doubtless many a brier-grown grave might find its fittest epitaph in these lines:

> Perhaps in this neglected spot is la'd
> Some heart once pregnant with celestial fire,
> Hands that the rod of empire might have swayed,
> Or waked to ecstasy the living lyre.
>
> But knowledge to their eyes her ample page,
> Rich with the spoils of time, did ne'er unroll;
> Chill penury repressed their noble rage,
> And froze the genial current of the soul.

Had a NEWTON, WATT, STEPHENSON, FRANKLIN, HOWE, or MORSE been denied the disciplined and suggestive power of education, the world, by reason of his ignorance, might have been minus some of its greatest wealth-producing agents. It is unquestionably true that the greatest results in the mechanic arts—observable in the money-making and labor-saving machines—such as the cotton-jenny and gin, the printing-press, the steam-engine, the sewing-machine, and the electric telegraph, and also, the great triumphs of engineering skill—monumented by the Thames tunnel, ocean navigation, the Atlantic cable, tubular and suspension bridges, Hoosac and Cenis tunnels, and great trestles over deep valleys and treacherous marshes—are the product of trained intellect, minds accustomed and disciplined to observe natural phenomena, and carrying a fundamental intelligence of the principles of mechanical philosophy into the commonest walks of life, and awakening aspiration to become immortal in history and the gratitude of the race by the invention or discovery of new powers, or the method of applying known forces to other ends. If anything practical should come of ærial navigation, the caloric engine, the pneumatic tube, or even the Keely motor, it will be in a train of sequences that finds its source of causation in steam carriage and telegraphic communication.

Education has achieved wonders in laying bare to human knowledge the anatomical and physiological structure of the human frame, assisting to the diagnosis of disease and formulating a *materia medica* for the prevention and cure of those innumerable ills to which the flesh is the unhappy heir. Educate the mind of Asia and Africa, and amid its tropical growths and hidden minerals other agents may be found for the alleviation of pain and the rapid cure of maladies that now baffle human love, and successfully challenge all the arts known to medicine. We know that by the application of the principles of chemistry to the analysis and fertilization of soils, coupled with botanical acumen addressed to a close and critical observation of the habits and food of plants, agriculture has been made vastly more productive, and the means of human subsistence proportionably cheapened. If by phosphates and other foreign fertilizing agents an acre of ground can be made to produce what it would take five times the area to bring forth in a state of nature, or in a worn-out condition, then that single acre is enhanced in value by all its added productive power. One of the results of the recent Geological Survey in Kentucky has been the discovery of an immense and inexhaustible bed of marl which possesses wonderful land-restoring properties. This single contribution of science to the tobacco and fruit raisers of the State, is a thou-

sand-fold compensation for all the cost of the Survey. Now, should the plowshare of civilized husbandry be run through the deltas and savannahs of the East, the re-enforced industry of the world, moving under the direction of educated supervision, will result in the production of an Oriental yeomanry, capable of suggesting vast improvements to the Western world in the mechanics and chemistry of agriculture. The mission of man is to subdue the earth, and the conquest can only be completed by scientific truth. "Knowledge is power." It is the only power that can lift the race out of the slums of poverty, wipe the beaded sweat from the brow of humanity, and inaugurate that blessed era of prophecy, when, "instead of the thorn shall come up the fir tree, and instead of the brier shall come up the myrtle tree, and the mountain and the hills shall break forth before you into singing, and all the trees shall clap their hands."

The aphorism, "knowledge is power," ascribed to Lord VERULAM, is but a paraphrase of the proverbs of KING SOLOMON, such as, "A wise man is strong;" "Wisdom is better than strength;" "If the iron be blunt, and he do not whet the edge, then must he put to more strength."

On the little island of England and Scotland, this minute, machinery is doing the work of 500,000,000 men. That is equivalent to the mere manual labor of the entire adult population—male and female—of the globe. Nor would they with the primitive instruments, do the work near so well as a few engines will do it, consuming a few tons of coal and a few butts of water instead of the muscle and sweat of human bodies. The wider wisdom spreads the more human strength is saved, comfort enhanced, and mind liberated from the curse of labor. Every new discovery and invention is aiding in the enfranchisement of the soul. Hence mind is worth more now than at any previous period in the history of the world.

The cotton-gin of WHITNEY, for instance, which relieved men from the tedious necessity of picking the seed from cotton by hand, turned over a multitude of men to other employments, produced a wider culture of the soil, and cheapened the clothing of the world. Now a quart of water and a peck of coal will produce as much in a day as, before the invention of the steam-engine, a brawny laborer could accomplish. A blunt axe suggests hard blows, strained sinews, a beaded brow, hacked work, and a horny palm, produced by the cicatrizing of many a blister. Wisdom is as good as strength, and intelligent skill will economize materials and money, time and temper. How suggestive is this passage from SOLOMON! "There was a little city, and few men within it, and there came a great king against it and besieged it, and built great bulwarks against it. Now, there was found in it a poor, wise man, and he, *by his wisdom*, delivered the city."

To the thoughtful reviewer of warfare, this calls up a number of illustrative examples, from the time when Archimedes, with his engines on the wall, sent to the bottom in the port of Syracuse the ships of Marcellus, down to the brave and successful defence of Antwerp under the direction of the old mathematician, CARNOT—aye, even to the construction of the Ericson monitor—the floating fort.

An eminent writer well says: "Science is never more sublime than when she wins and wears the civic crown. Even should there be no in-

vader at the gates, when a beneficent ingenuity is exerted to enhance the pleasures of peace; when discovery, chemical or dynamical, floods our streets with midnight radiance, and bids clear water spring up in the poorest attic; when it mitigates disease or multiplies the loaves of bread; when, by making them near neighbors, it forces nations to be friends, surely, the poor man whose wisdom thus enriches the species deserves to sit among the princes of the people."

I employ another illustration to show that "wisdom is profitable." The safety lamp is a very simple instrument, and doubtless many a CORNWALL miner has wondered why it was never discovered before the day of DAVY. But this discovery was made by SIR DAVY as the result of a series of experiments and logical inductions. He first, by a chemical analysis, learned in what ratio the compression of atmospheric air and fire-damp are explosive. The next step was to ascertain at what temperature the mixture detonates. It was previously known that if the explosive mixture were pressed through a tube and fired the flame would not travel back through the tube to create an explosion. Acting on this information, he inquired to what length the tube could be reduced with safety. He continued to shorten the tube until it was reduced to a mere metal circle, and found it adequate to prevent explosion. The last step was easy; he inferred that the flame would not penetrate a wire gauze, and the result was the safety lamp—a little instrument that has protected the lives of many thousands of men, and, by relieving the miner from danger, has enabled enterprise to sink its shafts deeper and run its galleries further, and thus has vastly cheapened coal, and with it every article of manufacture and merchandise which is produced through the agency of the forge. Had it not been for the spirit of scientific inquiry the world to-day would be paying double the price now demanded for everything made of iron, from a carpet-tack to a locomotive engine.

Education is a grand productive agent of human brotherhood. Ignorance tends to divisions. Men are now reading in decomposed intellectual rays. When the world is educated science will complete a thorough generalization and absolute truth will be reached. As the union of all the rays reflected by the prism produces the white light, so the union of all minds in a community of thought will discover ultimate truth. Mind will be unitized.

The unity of perceived truths will produce brotherhood. The tendency of foregone ages has been to the isolation of races—the hostility of nations.

> "Lands, intersected by a narrow frith,
> Abhorred each other. Mountains interposed,
> Made enemies of nations, who had else,
> Like kindred drops, been mingled into one."

The invention of the mariner's compass, of the printing-press, of the magnetic telegraph, of steam navigation and railway transit, together with the application of engineering to the levelling of hills, the tunnelling of mountains, the digging of canals, the filling up of valleys, and the building of bridges, have served to bring distant countries into neighborhood relations.

The Atlantic cable, the Suez canal, and steam ferriage have well nigh

annihilated time, tides, and space. The orient is our neighbor—the Golden Gate the hospitable port of entry for the population and produce of the mighty East. The wall is down in China, and civilization rushes through the breaches. American and British colleges matriculate students from Japan. Commercial interest is confederating the world. A grander alliance than that organized by the Amphyctionic Council awaits the nations of the earth—a species of brotherhood which will grow out of the acquaintance of mankind and the intersecting lines of interest. It is a confederation to be achieved through the instrumentality of science; by the exchange of commercial commodities; by a literature world-wide in its range; by methods of rapid communication, swifter than the revolutions of the earth upon its axis, when a remarkable discovery on the margin of the Mississippi shall meet an almost instantaneous hail from the delta of the Nile; and by the spread of a common religion, and the inspirations of a universal faith and hope. When FULTON first discovered steam navigation, he expressed, to a coterie of amazed and deriding friends in Paris, his belief that he would succeed, by the new motor, in propelling a vessel at the rate of five and six miles an hour over the tranquil waters of the Hudson. Now, scorning the billows, laughing at the storm, challenging the tides, a Cunarder plows its way across the Atlantic in such time as to tempt us to regard it as a mere ferry-boat navigating a narrow frith. When the Great Western first steamed into an American port, our people stood still with wonder. In the infancy of the world the pen of prophecy wrote "many shall run to and fro and knowledge shall be increased." See the throngs that congregate from all tribes, people, kindred, and tongues in the great International Congress of Industry at Philadelphia!

Science has broken through the stone masonry of Chinese exclusiveness; the steamship has passed through the golden horn and furrowed with its conquering keel the waters of the Bosphorus, and Constantinople and Stamboul are ports from whence the erewhile secluded Turk ships his person and goods for show at our Centennial Exposition! There are now no sealed ports. Wherever water flows there is freedom of sail. The great oceans throw their arms around the continents and kiss all shores with a greeting of peace. In 1776 a paragraph in a Philadelphia paper announced a "flying machine," which was nothing more rapid or winged than a lumbering stage-coach, to be drawn by relays of horses and to make the transit to New York in the then almost incredible time of three days. FRANKLIN, in fine prophetic mood and with a profound fear of ridicule, expressed the belief that the time would come when a journey between Philadelphia and New York would be accomplished in forty-eight hours. A little more than half a century ago the philosopher-printer died. What would he think to-day, if his spirit were re-incarnated, to see the locomotive dragging the burdened train from the one city to the other in three hours?

It is agreed on all hands that neighbors should be friendly. Science, in annihilating time and space, is making all races to know each other, to interchange goods, to compete in the same markets, and to compel a common interest in domestic, commercial, and political concerns, and thereby

hastening the day when the difficulties of all nations will, as we believe, be settled by an international congress. War will cease to destroy human life and accumulated wealth; debt, and the consequent burdens of interest and taxation, will no longer oppress nations and citizens; the soldiers will be turned over to the arts and become the yeomanry of peace, the swords will be turned into plowshares, the bayonets into pruning-hooks, and the cannon into chimes of church-going bells or journals, for the revolving wheels of trade and travel; thereby, the pains of poverty will be abated, and re-enforced industry will cheapen the means of subsistence. Science is the great herald of "the good time coming"—the bard that now sings in sweeter strains than the classic harp the song of the golden age—the prophet that presages the millennial era when the earth, reclaimed from thorn and thistle, bramble and brier, shall rejoice as the garden of God, and decorated with flowers and crowned with the fruits of a bountiful harvest, will be fitly arrayed for a happy bridal with the sky. No miracles are needed to regain Paradise. The mariner's compass, the locomotive engine, the steamboat, the railway, the cotton gin, the safety lamp, the spinning-jenny, the printing-press, the sewing-machine, the air ship, the McCormick reaper, the electric telegraph, and kindred inventions of science are the messengers that are preparing the way of the Lord and making his paths straight. The time for the relief of the cherubic guard, stationed at the gate of Eden, is close at hand. Adam, expelled from the garden and cursed, will triumph through his children, and they, wiping the sweat from their brows, will re-enter Paradise to eat of all the fruitage—save that of the tree of the knowledge of evil—of which they are sated and will not be tempted again by the blush of its apples. Ah! yes, the time will come when

> "The dwellers in the vales and on the rocks"

will

> "Shout to each other and the mountain tops,
> From distant mountains catch the flying joy,
> Till nation after nation, taught the strain,
> Earth shall roll the glad hosannah round."

Through the agency of cultured mind, baptized at the font of a pure religion, the world is to recover its pristine glory.

We may safely predict that the light of truth, like the sunrise of an unclouded summer's morn, is yet to spread over all the "dark places of the earth, full of the habitations of cruelty." The bright banner of a recovered humanity will float its emblazoned folds from every height of earth; and when it shall kiss the breezes that float up from all the interlying valleys, ignorance shall be left without a cavern, superstition without a spectre, cruelty without a victim, despotism without a serf, and caste without a pariah.

Who can fail to see while reviewing the conquests of science, that "peace hath her victories no less renowned than those of war?" It is the champion of truth; the vindicator of the innocent; the redresser of wrong; the patron of philanthropy; the armor-bearer of valor; the chariot of progress; the herald of hope; the prophet of a nobler future. It "plants no faith in blood," but it plants vineyards and olive groves; it lights no ma-

rauder's torch, but it builds the marble grandeur of cities, and hedges the hamlets of peace; it strikes no wanton blow at the defenceless, but throws its protecting shield afront the breast of the weak; it drags no chained victims to its chariot-wheels, but rides humanity through arches of triumph; it pulls down no temples, within which true incense ascends, but it feeds the flames of pure religion; it rifles no graves with hyena hunger, but it sculptures the tombs of the good with the choicest epitaphs that faith and hope can chisel upon the gateways of the dead; it blots out no star in the firmament of heaven, but kindles brighter lustre in every orb that burns on high; it dims no gem in the crown of the King of Kings, but would rather contribute its richest jewels to deck his diadem.

Prof. EDWARD S. JOYNES, of Vanderbilt University, then read the following paper on the

POSITION OF THE MODERN LANGUAGES IN THE HIGHER EDUCATION.

When I had the honor of appearing before this Association at Elmira, in 1873, I read a paper in defence of classical studies as an element of the higher education. In attempting to-day to define the relations of the modern languages to the same "higher education" I hope that nothing that I may say will be construed as in derogation of that argument. Such a disclaimer ought not in fact to be necessary. There is, and can be, no conflict of studies in a liberal education. While, with the extension of the domain of education, there is no longer room for all studies, there is yet room for an intelligent choice, with reference to intelligent purposes; and with the growth of the elective system there will be room for such extension of each as will develop its best results. While one study may be in its nature better for education than another, yet after all *that which is best studied is best;* any thing done willingly, heartily, and well, is better than any other thing done unwillingly or imperfectly. The question for the higher education therefore is no longer how to compress into one curriculum a *minimum* of every thing, but rather how, by the best methods and by the largest and most liberal study, to bring each and every department to its own best and highest development. Thus, with the multiplying interests of modern life and with the enlarging fields of knowledge, education—never losing its essential unity of aim—becomes more and more manifold in its outward forms while developing ever higher perfection in its various elements and resources. The most perfect division of labor, in education as in the mechanic arts, secures the highest results for society as well as the most perfect development of the individual. Such is the direction of modern education, as shown in the rapid growth of the elective system of study, even in the most conservative strongholds of the old curriculum. This growth only reflects the

necessity of the age in the demand for a higher and more varied educational development. Properly directed and controlled it need cause us no anxiety; we may thwart and deform, but we can not resist it.

The question now is therefore not whether the modern languages shall be admitted into the scheme of higher education, but how, *being there already*, they shall in their own place be brought to produce the highest educational results. Whether we would have it so or not, it is quite certain that the modern languages—one or more—will now be studied more and more in lieu of the ancient languages, or at least where the ancient languages are *not* studied. A large number of students will thus derive their linguistic and philological training from the modern languages only. Stating the case in its lowest terms, the most exclusive classicists will admit that this training should be made as good as possible. Hence the question of the best method of teaching the modern languages for the purposes of the higher education becomes an important one. It is also a pertinent one, because these languages, from this point of view, have as yet received so little consideration, and because the methods and helps employed in teaching them are so various, and, it would seem, so unsettled in principle or in purpose. Bearing in mind the caution of the committee that all papers are expected to be brief, we proceed to consider the question here suggested.

First, however, we will make the negative remark that we should regret to see the modern languages admitted by substitution for either Latin or Greek into the course of arts. The old degrees, bachelor of arts and master of arts, have so long and so typically represented a course of study founded on classical scholarship that to permit on any condition the exclusion of the classics therefrom would destroy the distinctive character of these degrees, as well as offer a temptation for the neglect of classical study. Our college and university degrees should, at least in a general way, *mean something;* and the degrees in arts have so long had this distinctive meaning that it should now be accepted as traditional and prescriptive. If a modern language is here required it should be in addition to, not in substitution for, the ancient languages. The true solution of the difficulty should be in the division of degrees so as appropriately to represent the various departments of modern culture, not in confounding their established significance. The boast of Teucer that he would make the name of Salamis ambiguous is one that we should not seek to emulate in our educational nomenclature.

And first as to the *pronunciation.* Its importance for the modern languages need not be discussed. Whatever opposite schools may hold as to pronunciation or accent in Latin or Greek, in French and German we have certainly a living standard, conformity to which as nearly as possible is of absolute and prime necessity. This requirement has in itself a distinct educational value. I believe it may be asserted that if there were no other motive for the study of a foreign language, the training afforded to the vocal organs would alone be a sufficient inducement and reward. This training it is impossible to give so fully in the mother-tongue, because, first, it *is* the mother-tongue; and secondly, in our case its sounds are so often obscure and difficult of analysis. On the other hand, in

learning to pronounce a foreign language precise and careful analysis and comparison of sounds become necessary; new tones are acquired, and therewith, of necessity, a precision, a power, and a delicacy of utterance which as a mere physiological training are of great value, and which are reflected in the native speech. Without any reference therefore to the uses of French and German scholarship, and for the sake of English speech alone, the mastery of French and German pronunciation would be well worth the study. From this point of view—though perhaps the lowest—we may confirm the requirement of a careful and accurate pronunciation, to be enforced by constant exercise. Teachers of modern languages who are either not qualified to teach this pronunciation or are careless or indifferent as to its requirement do not come within the range of that "higher education" which is the subject of this essay. They can only be tolerated until higher standards shall be universally demanded.

The practical remark which I would make in this connection is that, to a considerable extent at least, the pronunciation should be taught and practiced in advance, *before the earliest lessons in grammar.* The necessity for this remark lies in the fact that, as I believe, this course is not generally pursued. Judging from the meagre provision made for teaching pronunciation in most of our text-books, the theory seems to prevail that the pronunciation can be picked up as the pupil makes his way through the grammar. My own experience concurs with the lesson of reason, that this is not and can not be the case. Left to himself to learn his grammar, the pupil will learn it with the wrong pronunciation, and the better he learns it the worse his pronunciation will be and the harder to get out of his head. Every line learned with a false pronunciation adds to the difficulty of learning the true; and no pupils are so hard to set right as those who have gone the farthest wrong. I have known a long residence in Germany fail to correct the defects of early teaching in pronunciation. I think it therefore important that the earliest lessons should be for the pronunciation only, and that this should also remain the most prominent subject of attention for a considerable period during the earlier study of grammar. Hence I could wish that our early text-books made generally more provision for preliminary exercise in pronunciation, and that, in default thereof, our teachers could be impressed with the necessity of supplying this defect for their own classes. I would urge the importance of this, and indeed of all that pertains to pronunciation, all the more because in fact the pronunciation is the one thing which the pupil can not learn for himself, in which he is wholly dependent upon his teacher, and in which early error or carelessness is most likely to be forever irremediable. It is thus the most important subject of the early instruction.

Apology should perhaps be made for introducing into the department of higher education remarks so elementary as these. If the discussion concerned Latin and Greek this would not be necessary; for the elements of these are taught in the schools, and the higher institutions are concerned only with what may properly be called the higher instruction. It is not so with the modern languages. These are often begun in the college and university; and until our schools are better prepared for teaching them it is perhaps best that this should be so. Another generation

may witness a class of secondary schools throughout the country prepared to send young men to college with thorough elementary instruction in French or German; but they do not exist now. In order that they may exist then, we who are now sowing that our successors may reap must do our work well, and must consent for the present, even in the department of higher instruction, to consider questions as elementary as that of teaching pronunciation.

When we come now to consider the *method* of instruction we must of necessity first ask, what is the *object* of it? The modern languages may be studied for various purposes, under various circumstances; and the method will vary of course accordingly. But when we seek, in general terms, to define the object and the method which must characterize the study of the modern languages in our higher institutions of learning (and that alone is the subject of this paper) we answer at once that they must be *disciplinary* and *educational* in the highest sense. To learn to speak French or German, however valuable such an accomplishment may be, is wholly impracticable under any conditions which we can command in our higher institutions. This is a practical task which requires an amount of time and of personal instruction for the individual which can not be furnished in organized classes; such work must be left to private tuition. Even then, except under the happiest surroundings, the result must be unsatisfactory. All that can be done, except by an actual foreign residence, is to prepare the pupil *to learn to speak.* But in an organized institution of learning this object can not be entertained except as a wholly subsidiary one—surely not to the sacrifice of the broader and deeper study of the language which alone can give true scholarship, or of those more philosophical methods which alone we can call disciplinary. We must be content to do what we can *do thoroughly.* All thorough work is disciplinary: thoroughness itself is the best discipline in any work; and discipline which gives the trained power to acquire is itself the best acquisition. We venture therefore to assert that even for one whose main object is to learn *to speak*, the disciplinary study of the language will be a better preparation than all that can be learned from phrase-books or from conversational exercises in the class-room. The power to speak must be a *growth;* and it will grow best and quickest from the subsoil of a disciplined knowledge.

We assume then that the modern languages for the purposes of the higher education must be taught, like the ancient languages, with a view to linguistic discipline and a literary culture. Reading rather than speaking should be at once the end and the means. The language itself is the subject-matter, and all that belongs to the study of language and to its discipline, intrinsically or in relation to our mother-tongue, is here properly at home. In a word, essentially and with modifications to be hereafter suggested, the same principles and means of instruction should be here employed as are employed in teaching the ancient languages. Upon these general principles all classical teachers are in the main agreed; our time here does not admit of their further discussion, nor does the occasion require it.

It may not, doubtless, be claimed that the modern languages are altogether as well adapted for formal discipline as the ancient; for in their formal development they are less perfect as languages. They are also less capable of objective and analytical study, because, as modern languages, they have more in common with our own modes of thought and expression. Yet for this very reason perhaps, while less adapted for *elementary discipline*, they may offer deeper and more subtle questions for study in the higher instruction. In word-form and in constructive grammar French and German are inferior to Latin and Greek, but in idiomatic or logical forms they are superior. Their grammar is expressed not so much in the relation of single words as in those higher combinations of phrase and idiom in which elementary word-form is absorbed in the higher unity of the complex logical term. The units of language are, so to speak, of a higher order; they seem simpler when they are in fact more complex, because less elementary: there is less of *form* but greater variety of *relation*. Thus also the forms of ancient life were simpler in their plastic individuality; modern civilization has developed higher and more complex social organisms which seem to dwarf the individuality, but which really make individuality more many-sided and more potent. In the modern languages the relations of the thought will be expressed not in single words only, but in entire phrases which will often defy verbal analysis. Word-parsing by etymology and syntax is thus reduced, but sentential and logical analysis becomes more important and more subtle. This is pre-eminently the case in English, the most modern of all the modern languages, which most of all has laid aside formal grammar, and in place of it has most of all developed the power of idiomatic expression and of idiomatic growth. A distinguished writer has called it the *grammarless tongue*. The truth in this brilliant phrase is only this: that of word-grammar it has a minimum; on the other hand, however, of idiomatic grammar, it has a maximum. Its elementary grammar is thus the simplest, its higher grammar the most difficult among languages. So long as we seek its grammar in mere analogies to the formal grammar of Latin or Greek we shall never find it, and shall never know English; when we seek it in the history and genius of the English idiom we shall find it in full and rich development—a grammar all its own, characteristic and distinctive, and well worthy of profoundest study. So too in less degree in French and German; while we shall not find the same grammatical discipline as in Latin and Greek, we may find another which shall become especially valuable in the higher ranges of instruction. Meanwhile they both possess enough of formal grammar to illustrate the nature of inflection and of formal construction. The fact, we may here remark, that German has so much more of this than French is another reason among others why, when but one can be studied, German should be preferred. Indeed it is remarkable how far the German language, while developing the strongest characteristics of modern thought, has preserved the types of the ancient form. It seems thus to hold a happy mean between the ancient and the modern languages, and to illustrate the characteristics of both.

The relation of French and German to English gives to their study for

us a value which need here be only alluded to. They stand indeed nearest of all languages to our own, having themselves contributed its most essential and most intimate elements. Latin, it is true, has given us more words, but these belong to us rather by derivation than as actual elementary constituents; while German through Anglo-Saxon, and French through the Normans, have given us the warp and woof that are woven into the fundamental web of our English language. Thus, historically and philologically, they present for us the most interesting field for study. This value is of course increased by the fact that they stand on the opposite sides, so to speak, of English, and that their influence, though concurrent and mutual, has been of opposite character; the one fundamental, the other succeeding; the one positive, the other negative; the one giving us all that we have of grammatical form and structure, the other by modifying and destroying form, giving the higher simplicity, ease, and grace of logical expression; the two colliding yet blending in spite of themselves, so as to unite the best characteristics of each; the sturdy, half-civilized Saxon, conquered at first, but ennobled at last by the intermingled grace and genius of the proud and gifted Norman—producing thus, through political as well as linguistic collision, convulsion, and final union, the noblest race as well as the noblest language of modern history. French and German we may study thus *with reverence*, for they are *ours*; and they may illustrate for us every principle of linguistic truth necessary for instruction or discipline, or for the inspiration of a patriotic gratitude for the language which, through them, we have inherited.

Scarcely less interesting, when they are studied together, is the relation between French and German themselves. Gaul and Teuton are not more unlike in their mental and moral characteristics than are the French and German languages, as indeed the languages themselves are the best representatives of these respective characteristics. The one all brilliancy and sparkle, clear-cut, sharp, bright as a diamond, reflecting every light of tone, sentiment, or style with unrivalled clearness and rapidity; the other deep, earnest, strong—slow-moving with the weight of its ponderous compounds amid the intricacies of its inversions and transpositions; the logic in the one, with metaphysical self-consciousness, dominating formally the structure of every clause lest it should fail to be recognized, in the other floating unconscious and clear, like a ripple, on the surface of a language in which it is impossible to be obscure. But we will not lose ourselves in epithets and figures where all such description must be unsatisfactory. Let us rather express the hope that in French and German, as well as Latin and Greek, besides comparative etymologies we may have text-books on *comparative syntax* and *style*, which shall analyze and exhibit by comparison and contrast the literary genius as well as the grammatical structure of the languages. Such a work for French and German would be full of curious instruction and interest. Much may be done even without a text-book by the intelligent teacher.

The wider philological relations of French and German need not here be indicated, as they lie perhaps outside of the scope of the present discussion. But whenever the range of the instruction permits German may be made at once the centre and starting-point for the study of the

Teutonic languages in their various dialects, modern and ancient, with all their valuable lore of history, myth, or philosophy; French likewise for the Romance languages, in all their relations; and in the songs of the Minnesänger on the one hand, and the lays of the Troubadour on the other—in the *Niebelungen Lied* and in the *Roman de la Rose*—the student may drink at the earliest and purest fountains of the poetry and the chivalry of modern Europe.

But that such studies may be possible it is clear that there must be division in the labor of instruction, or, what amounts to the same thing, in the arrangement of departments. A professor who has to perform the drudgery of teaching several languages, or even French and German, in detail can have no time for such instruction, nor could he prepare his students to receive ft. A professorship of modern languages is like a professorship of physical sciences: the time was when it might have satisfied the demands of scholarship, but that time is past. For each language required, with the related literature and philology, there should be a distinct chair. But if this is impracticable, then at least two—the northern or Teutonic languages on the one hand, with German as the centre, and the southern or Romance languages on the other, with French as the centre; and while, in either department, proficiency in German or in French alone might perhaps be *required*, yet the associate studies should at least be made *elective*. Thus modern languages might be made to represent a real historical and philological discipline, besides mere practical attainments.

To these, as distinct departments of modern languages, I would add another, not less essential—English; that is, *the English language, its sources and its history*. English, it is true, has for us other aspects of interest and importance, which require other study; yet as a language it is one of the modern languages, and must be studied as such. A more thorough study of English *as a language* is essential as a foundation for higher and more critical scholarship in its rhetoric, its literature, its philosophy. This study, which the age now loudly calls for, must be conducted essentially upon the same principles as the higher study of other languages. In other words, English as a language is a branch of the department of modern languages—the most important of all, and not the least difficult—and should have its due place and prominence there.

If this tripartite division is not yet practicable it is only because our higher institutions are not yet prepared to do justice to the study of modern languages. It should at least be included in our aspirations.

We have spoken of French and German only, because practically these are the languages with which we are most concerned. To include other modern languages would only widen the range of our remarks without weakening their force, if they have any. If limited to one language, we have already expressed our preference for German, for reasons not necessary to be indicated. But the reasons for this preference are immeasurably strengthened if on the other side of English (as will often be the case) the Latin should be added. We must not lose sight of the fact that a chief consideration which renders any language worth our study, is its relation to our mother-tongue. In this view Latin may in some degree

take the place of French, but not of German. Hence where Latin is to be supplemented by the study of only one modern language the arguments in favor of German become still stronger. How far these arguments may, in special cases, be overweighed by special or personal considerations in favor of French can not here be discussed. We deal only with the general question.

We have written, too, mainly as though the modern languages were studied without the ancient languages. This is the lowest view of the case—for the modern linguist certainly the most depressing. Where they are studied together then all that we have said might be stated still more strongly. For then French and German as well as Greek and Latin will shine not only with intrinsic but with reflected light; then the ancient and the modern languages both illustrate and re-enforce each other by analogies and contrasts reflected and redoubled; then we have the elements at least of a *science of language* within a range not large indeed but pre-eminently rich and instructive; and then finally does English, queen language of all, become for the student the radiant centre of a brilliant quadrangle whose converging radii meet in our own supreme idiom, which is indeed "the heir of all the ages," latest-born and most richly endowed from all these noble sources. It might be too much, perhaps, to claim that no teacher in the department of higher instruction should teach either ancient or modern languages who is not proficient in both; but it is at least certain that to be deprived of either field of illustration robs the other study of much of its interest. If it be allowable to refer to personal experience, I may say for myself that whatever success I have had as a teacher of modern languages is, I have always thought, largely due to the fact that I was first trained in classical study.

Although we have said above that the modern languages should be studied *essentially* with the same objects and by the same methods as the ancient languages, it does not follow, as we there already indicated, that these methods should be *exactly* the same. On the contrary, it is both necessary and desirable that they should not be. In the first place, the amount of time allowed for the modern languages is generally much more restricted, and this necessitates a more rapid study, which is the more possible also as the modern languages are frequently begun later and with more maturity of mind. Moreover the grammatical material is slighter, and its form less difficult; so that it admits to much greater degree of being anticipated by practical exercises, and of being taught *by the language itself*. As has been already remarked, the highest grammatical discipline in the modern language is found in those idiomatic forms which can be learned only after the elements are mastered; and the sooner we bring the student into contact with these the better. Hence we think that the preliminary grammatical study should be reduced to a minimum—the merest outline of the essential forms—and the student should be brought, as soon as possible, to the *actual reading of the language*. Out of this and by this, as a living organism, the grammar, in its vital and significant relations of form, structure, and idiom, should be developed and illustrated. Only thus indeed can the learning of grammar be made any thing else than a *drudgery*. This principle, so well phrased by Prof. GILDERSLEEVE in the

neat preface to his Latin Primer as "early contact with the language in mass," if true, as he rightly insists, for the teaching of Latin, is so much more practicable, in the study of the modern languages.

By *reading* I mean here not mere grammar sentences (for these must be used to help the earliest learning of the forms), but selections of fit and attractive literature, with suitable helps. In urging this reading as early as possible, without waiting for any elaborate study of grammar, I am glad to quote the explicit authority of Professor WHITNEY, in the preface to his German Grammar, which he declares to be meant to lead "at the earliest possible moment to the reading of German authors." On another point too, not generally conceded, I am happy to find his opinion no less explicit. I believe, with him, that all writing of exercises, even the simplest sentences, into French or German should be postponed until after some intelligent progress has been made in the reading, and the grammar itself comes to be reviewed. Such exercises, at first so strange and difficult, because they reverse the natural process of acquisition, become then intelligent and helpful. Meantime, I should look to the reading, and not to these, to confirm the knowledge of grammatical forms. I know by oft-tried experience that by this method a book, for example, like OTTO's French or German Grammar, may be gone through first in outline with the reading lessons only, and then thoroughly reviewed, with the exercises and with added lessons from a Reader, in less time than it can be gone through once in the more usual mode of writing the exercises into French or German from the beginning. The difference in the intelligence and interest of the work is still greater. I beg leave to emphasize this opinion with all the weight due to Prof. WHITNEY's eminent authority, added to my own humble yet not insignificant experience. The same principle, I believe, holds true for Latin and Greek also. It needs, however, to be especially insisted upon in the modern languages, where rapidity of progress at first is so much more important.

I find myself once more discussing elementary questions. My apology has been made already. When the elements of French and German are satisfactorily taught in the schools we may omit the consideration of such questions in our higher institutions.

In other important respects too, in view of their different practical relations, the instruction in the modern languages must be modified. While the general method and discipline will be the same, a different *kind* of scholarship from that in the ancient languages is required, and this must be borne in mind in the teaching. As *modern* languages French and German stand in a far closer relation to us than Latin and Greek. Their use is a more practical one, and a greater practical facility in the use of them is required. Their literature and their science stand in immediate relation to ourselves. Thus the *literary* element becomes more important. There must be more *reading*, and all that gives facility and rapidity in reading must be more insisted upon. This also requires, especially with our narrower limit of time, a proportional abridgment of purely grammatical and philological study. For this discipline in its best and largest results we must still look, without regret, to the ancient languages. Yet in the modern languages, on the other hand, we may find a *literary* culture which only few students can

hope to attain from Greek or Latin. The teacher in either case must study to find the golden mean; and while he will place the emphasis of his instruction according to the requirement of his own subject, he will not forego those exercises which belong to the largest discipline in every direction. *Language* and *literature* can not be dissociated: each can be studied only in the light of the other; and while they may enter in different proportions as elements in the study of different languages, their close dependence can never allow the neglect of either. The teacher of modern languages must aim at greater breadth of reading and larger practical skill in the use of the languages; but these can not be attained if thoroughness of disciplinary study be neglected.

Again, while we can not teach our pupils to speak French or German, we should not forget that they may afterward have occasion to learn to speak; and our instruction should be so fashioned as to make this task for them *as easy as possible.* Hence every thing that belongs to the education of *the tongue* and of *the ear*—the twin organs of speech—should be most carefully and constantly attended to. The pronunciation should be made not only accurate, but easy and natural, and the ear should be trained by constant exercises in dictation, reading, and recitation until the sense shall be equally clear in the spoken as in the printed sentence. The *power* acquired by these exercises gives to language a living significance which nothing else can give. The ear, not the eye, is the natural organ of language; and the more we bring language into relation with the ear the more do we enlist all the principles and processes of nature to aid its acquisition and to increase its interest. Even where *speech* is not had in view this general principle should be regarded. It deserves, I think, more consideration than it has received, even in the study of the ancient languages; for the modern languages it is of prime importance. Even with our present narrow limit of time such exercises should engage no small part of our class-room work. At first difficult, they soon become interesting; and the new *sense* which they develop adds interest and facility to all the other studies.

To write with ease and idiomatic correctness a foreign language requires, like speaking, conditions which we can not furnish; but here, in even greater degree, a firm foundation may be laid. Facility at last can be based only upon discipline at first. No teacher needs to be reminded of the value of written exercises at every stage of the instruction.

So much as to *how* the modern languages may be taught. A more important as well as a more difficult question is, *who shall teach them?* This question, though it may be a delicate one, can not, in good faith, be avoided. Some prevailing opinions on this subject need, I think, careful revision.

Nativity alone does not, of course, constitute qualification. How far is it essentially even a *recommendation?*

Unquestionably the first requisite in a teacher of any language is a competent knowledge of the language to be taught. The second, which is hardly less important, is a competent knowledge of *English.* By this knowledge we mean here not merely the ability to read, write, and speak English, however *perfectly,* but, more than that, the power and the habit of using English as

the *natural speech*, even in the actual presence of the foreign idiom and through all the trials of the class-room. That is to say, the teacher must be in full sympathy always with the modes of thought and expression which are native to the pupil. He must occupy *his* stand-point of idiom; he must comprehend *his* difficulties, and be able to explain them from *his* point of view, in relation to *his* linguistic consciousness. This he can do, if a foreigner, only so far as he identifies himself absolutely with the English language, making it, for the time being, his *mother-tongue* and his own a *foreign language*. With those not born to English speech this is a rare accomplishment, which requires not only great familiarity with English, but that rarer discipline which gives the power of complete abstraction and intellectual self-control; for no relation is more intimate or more powerful than that which holds the natural mind under the dominion of the native idiom, a relation the more intimate and the more powerful because so profoundly unconscious. The difficulty with many foreign teachers—let me say, for example, German teachers of German, however accomplished as Germans—is often that they can not divest themselves of the *instinct* that German is the mother-tongue and English the foreign language to be taught. For them German is *subjective*, English is *objective*. Thus they will unconsciously regard German from the German, not from the English stand-point, or, tempted from the one to the other, they will lose themselves and mislead their pupils in the confusion of a double point of view. So in the text-books of such authors one might sometimes imagine they were meant to teach English rather than German. Explanations will be directed, unconsciously, to difficulties in the English idiom, while difficulties in German will pass unnoticed and unexplained; and at other times the *form* of the statement will show that the writer has the German *in* his mind and the English *outside* of it. Such books reverse for us the natural order of thought and of acquisition. Such a teacher in the class-room is a foreigner to his pupils, and they are foreigners to him. There can be no full intellectual sympathy. He can not understand their difficulties, nor explain them as they need to have them explained; nor can he realize, often, why they do not see what is so clear, because so wholly instinctive, to him. Such books and such teaching not only increase the difficulty of learning, but breed confusion of method and of thought. Let us insist that French and German, as much as Latin and Greek, are for us foreign languages, and must be taught as such, with objective reference to English as the only subjective mother-tongue. Confessing this, we shall perhaps admit the consequence that birth implies only an added caution in the selection of our text-books and of our teachers. Nay, rather, if I could, I would have the German to teach French and the Frenchman to teach German; for then at least each will be teaching a language which he has himself *learned* by objective study, and *by experience* he will understand the wants of those who must learn it likewise. This experience will compensate for much of mere practical skill in the language. But, rather than either, I would have both French and German taught by our own American scholars, so far as these can be found with requisite qualifications. Such scholars are becoming rapidly more numerous in our country. It is, we believe, only through their influence that the de-

partment of modern languages can be elevated to its proper rank and dignity in the course of higher education. I state this conviction because I believe it due to my subject, not without the profoundest respect for those French or German authors and teachers who constitute the numerous and brilliant exceptions.

The evil here mentioned is greatly aggravated by a fact to which, though not belonging to the department of higher education, I must here briefly allude, because of its very great importance, and because the higher education itself suffers so much from its consequences—I mean the habit, especially in the public schools of our larger cities, of teaching German to American and German children *in the same classes.* The habit is fatal to all right method. No system of instruction can be devised which in the same class shall meet the wants of both classes of pupils. In truth, wholly different methods and materials are needed for the two, and the effort to find an impossible compromise is necessarily injurious to both—most injurious, if the teacher be a German, to the American pupil. It is fatal also to that complete indentification of the teacher with either class of pupils which has been above described. I have myself witnessed such recitations a few instances, with results corresponding to this opinion. I should be glad to believe that the larger experience of others could justify any different conclusion.

The same evil, which we can hardly believe to be here overstated, shows itself also in some of our elementary or public-school text-books. The publishers—some of them keenly conscious of the absurdity, yet under the inexorable demands of trade—seek in vain to meet the impossibility of furnishing *one* book which shall meet the double want. It can not be done. The book that is good for one class is of necessity bad for the other, and the effort to compromise prevents the production of the best books for either. The remedy is to be found, I think, in the exclusion of German *as a vernacular study* from our public schools altogether. Let us recognize the fact, and insist upon it as a duty at once professional and patriotic, that English alone is the mother-tongue of this nation, and that if any persons, of whatever nativity, would study in our schools any other language, they must study it as a *foreign language,* by books and methods adapted to the English mind. If our German fellow-citizens ask more, let them furnish what they need in their own homes or through private tuition. If the phrase "German in the public schools" means any thing more than this, it means a prophecy fraught with evil to our nation. We can not recognize two national languages; we can not, as a nation, educate two distinct nationalities. This matter belongs properly, it is true, to the public schools, but it affects also the higher instruction. If it is an evil, we should here recognize it as such. The higher institutions of learning stand in close and ever closer relations to the public schools. It is chiefly to them that the schools must look for the influence of wise example, and for the possession of wise and competent teachers in every branch of knowledge.

This discussion has already been too far extended; it has embraced more than I meant to say, yet, after all, less than the subject demands. With each year the modern languages grow in importance to our schools

and to our nation. They can not long halt below the high place they are entitled to occupy in our educational system. With them English too, itself the greatest of the modern languages, and with a value to us which no other can rival, will, we hope, soon make good its claim to the highest instruction in every institution of higher education. The two topics are intimately connected; they are well worthy of the continued consideration of this department of the National Association.

My subject, as named by myself, was "The Method and Discipline of the Modern Languages in the Higher Education." The committee, with a wise reference to that brevity which they enjoined and which I have violated, changed this title to "The Position of Modern Languages." The one view of course covers the other. Yet if I might, in conclusion, define in a few words more strictly the *position* which I would claim for the modern languages, I should say: Side by side with the ancient languages, as with every other department of liberal and scientific culture; to be taught by the ablest teachers and by the wisest methods, with reference at once to scientific scholarship and to practical use; to be recognized by diplomas and degrees appropriate to their character, yet not by substitution for Latin or Greek in the degrees of arts; beyond, this, however, to be fully admitted into our schemes of elective study; and to be elevated from the merely tutorial position which they have so often occupied to a rank and dignity in our higher institutions of learning commensurate with their disciplinary value, with the literary importance, and with their intimate relations to our own language, history, and nation.

Second Day's Proceedings.

TUESDAY, JULY 11, 1876.

The Department met at 1 P. M. DR. BOWMAN of Kentucky was requested to act as presiding officer. After the appointment of a Committee to nominate officers for the next year, the regular exercises of the Department were opened by a brief address from Prof. HENRY E. SHEPHERD, Superintendent of Public Instruction, Baltimore, in which he discussed the terms Anglo-Saxon and Early English or English, and maintained that the use of the word English to designate all phases of our language, both before and after the Norman Conquest, is erroneous and misleading. He asserted that the use of the compound adjective, Anglo-Saxon, is supported by the best authority, that of the people themselves, and their rulers; and cited examples from Anglo-Saxon charters, and royal proclamations, including those of King Alfred, to make good this statement.

The terms *Saxon* and *Anglo* occur frequently in the vernacular language of the people, and the combination Anglo-Saxon, first used by PAUL the Deacon, expresses precisely the relation that the different communities and tribes sustained to one another. They did not constitute a nation in the strict sense of the word, they had no well-defined consciousness of unity; and even the Heptarchy in its best estate, was merely a federation, an expedient resorted to for protection, or political aggrandizement. The consolidating power of the Norman Conquest, blended the discordant elements, introduced political and national unity. As there was not an English *nation* before the Conquest, so there was not an English *language*, previous to that epoch. The study of English constitutional history can not fail to confirm this view.—In addition, the literary form of the English language was not evolved from the classical Anglo-Saxon of Wessex, but principally from the East Midland dialect, which is Anglian and Mercian in origin and character, and is distinguished from the Winchester or court speech, by strongly-marked differences. It is also urged, that as the Anglo-Saxon writers commonly employed the term English or *Englisc*, we are bound to retain the designation. There is neither logical nor historical propriety in its retention upon this ground, at least. The English and the French designate the Germans by terms never recognized or employed by them, yet their national pride is not offended, or their national unity disturbed, by being called Germans in England, and *les Allemandes* in France. With much more consistency might Italian be denominated Latin. The English is essentially a "new creation," as has been well said, not a development out of Anglo-Saxon. More than one-half its vocabulary is derived from other sources, its grammar, its rhythmical and metrical characteristics, have diverged more and more from Anglo-Saxon, and its peerless literature has little in common with the Saxon literature. The speaker dissented from the views of *Freeman, Morris, Sweet, etc.*, and insisted that the proposed abandonment of the term *Anglo-Saxon*, is contrary to sound philology, sound logic, and to the teachings of constitutional history.

Prof. SHEPHERD's address was discussed with marked learning and ability by Prof. JAMES GARNETT, LL. D., St. Johns College, Prof. E. S. JOYNES, LL. D., Vanderbilt University, Prof. W. D. HENKLE, Ohio, and Prof. W. C. SAWYER, Lawrence University, Appleton, Wisconsin. The speakers seemed for the most part to concur in the views advocated by Prof. SHEPHERD.

The paper of Prof. JOYNES, "The Position of the Modern Languages in Higher Education," read the day previous, was then taken up and discussed by Prof. SAWYER of Lawrence University, Prof. RADDATZ of Baltimore, and Prof. SPALDING of N. J.

Prof. SAWYER said, I fully believe that thoroughly-prepared teachers of the same nationality as the student, are more successful than teachers native to the language, and foreign to the class. Only the teacher of the same nationality as the student, appreciates all the difficulties; only such a teacher knows all the expedients by which they are overcome. He

alone occupies such a stand-point that his instruction can be easily understood. As for the pronunciation, a matter of the greatest importance and difficulty, if the teacher has not mastered it, do not employ him, but if he has, you may be sure he knows both what the difficulties are, and how to master them. The native to the language pursued does not know that it contains any difficulties of pronunciation. He is even liable to have great dialectical faults in his own utterance, and if he has enough phonetic sense to detect all errors, he rarely can do more than set the correct example of pronunciation, and this is never sufficient to secure a perfect pronunciation of sounds new and difficult.

Prof. SAWYER then raised the query whether the plan of the essay gave the student enough training in the utterance of connected sentences, so as to bring out the spirit of the language, in its tones, inflections, and colloquial phraseology.

The discussion of Prof. JOYNES's paper was continued by Prof. RANDALL SPALDING of N. J., who said:

Mr. President:—My interest in this subject prompts me to add a few words to what has been said.

It is an important question to decide whether or not American scholars can, without residence abroad, acquire a correct pronunciation of foreign languages. It is, in my opinion, possible for such scholars to acquire a pronunciation sufficiently correct for all practical purposes, yet to this rule there are many exceptions, and only those native American scholars should be selected to teach foreign languages in whom a certain natural aptitude compensates for the supposed lack of opportunity. Men differ widely in respect to their ability to make or imitate sounds. This difficulty may perhaps be overcome by careful training at an early age, but is not so easily overcome when the pupil has reached the higher grades to which time the study of foreign languages is so commonly deferred.

This difference in ability to pronounce, every teacher of French or German has been obliged to recognize among his pupils. It was especially forced upon my own attention while at the University of Göttingen, where it was my good fortune to spend some time in study.

A young man, boarding in the same family with myself, had in a short time so perfectly mastered the pronunciation of the language as to be commonly mistaken for a native German. Yet he had begun the study of the language comparatively late in life. I should add that he pronounced English equally well.

I became acquainted with another American studying at the same place, and a much younger man. He had already spent nearly two years in Germany, had associated almost exclusively with German students and German families, and could converse in a style remarkably free and idiomatic; yet his pronunciation was simply abominable, and in this he was making apparently not the least improvement. He was engaged in the study of German, including the older dialects and literature, with the intention of becoming an instructor in the language in his native country; and in spite of the glaring defect that I have mentioned he will doubtless obtain a good position. I mention this in order to suggest that in the selection of teachers of foreign languages greater care be taken and that

only those be selected who from thorough training or natural aptitude, or both, are in all respects competent.

The question, How to acquire a correct pronunciation is an important one to discuss, for failure in this respect generally constitutes the sole objection to the employment of native Americans. When correctness in the pronunciation has been attained, the American scholar is by all means preferable to the native German or Frenchman in the teaching of these languages. In this I heartily concur in the opinion expressed by the gentleman before me. In the learning of German for instance a host of difficulties arise out of differences in idiom. The new ways of expressing thought are at first strange and bewildering; the simplest sentence has its peculiar and invariable laws of arrangement; the parts of speech differ more or less widely in their functions from the same parts in English; a multitude of nice distinctions between words must be observed, since to use words merely in accordance with the meaning assigned to them in the lexicon would often make one ridiculous; and again the pupil is surprised to find so large a part of his own language figurative and is constantly puzzled to know whether in the foreign tongue the same figure may be used.

Now all these difficulties the native American teacher has met and conquered. He appreciates therefore the obstacles that lie in the pupil's way and even anticipates them. He conducts his class swiftly and successfully past all hindrances, since he is himself thoroughly familiar with the way.

So the truth is apparent that an American can better instruct American pupils in German than a native German; and it is also true and for the same reasons that a German is a better instructor of German pupils in the English language than an American would be.

A simple incident will illustrate this. A short time ago in Leipsic a number of students sat around the dinner table. Among them were several American students. In course of the conversation a German student, who was trying to learn English, called upon an American to explain to him the difference between the words "any" and "some." The American was a graduate of one of our best colleges, and was generally recognized as an accomplished scholar, yet was he unable at the time to give an intelligible answer. He had been taught from childhood how to use these words, but had never found occasion to make for others any clear distinction between them. Now these distinctions the German learns to make in all his study of English and thus prepares himself, as no Amercan would be prepared, to teach the language in the schools of his native country.

We desire to know what is the best method in teaching beginners in French or German, and we welcome any suggestion that throws light upon this question. Some advocate what they are pleased to call the "Scientific Method," and others the "Practical Method." It seems to me that the advantages of both these methods may be combined. Allow me to state briefly the course that I pursue with a class in German.

The class spends at first about five or six months in studying some grammar. I have chosen Otto's, because it is somewhat shorter than many others. During this time the pupils translate the German exercises

and translate an equal amount of English into German. After this work in which they become thoroughly grounded in the forms of inflection, I give them WHITNEY's Grammar and Reader. In this they read for a time, longer or shorter according to the capacity of the class, and until they are able readily to analyze the sentence and to describe the properties and relations of the separate words. They then procure a good German novel of which there exists an English translation. I have used EICHENDORFF's "Aus dem Leben eines Taugenichts." Both the novel and the translation the pupils are required to purchase. Five or six pages are assigned as a lesson. The pupils are required to read aloud at home for a certain specified length of time each day, the time being generally not less than one hour. They are to spend a fair proportion of their time on the lesson in German and be prepared to read the entire lesson in the class. If they are unable in the allotted time to master thoroughly certain difficult phrases and sentences, which usually consume so large a share of the pupil's time, they are excused from these until they have been explained in the recitation. This book the pupils are required to read in the class, as I have said; but they are not, as a rule, required to translate. A good teacher quickly discovers by the reading whether the pupil understands the passage in hand. Questions are asked and instruction given according to the time. The pupils must be prepared to explain any sentence when called upon, but an elegant translation is not to be expected, since this has not been aimed at in the preparation of the lesson. During all this time the pupils are required to prepare written translations of German into English.

In this way to be sure there is lost a certain discipline in the use of language, but should not modern languages be taught rather for use than for discipline? Should not pupils be taught to think in French and German and become able to read without the constant mental process of translation? It seems to me that in our teaching, reading and translation are too often confounded.

This method of teaching has grown out of my own experience in learning the language, and with it I have had quite as high a degree of success as I had dared to anticipate. I am by no means certain however that this method is the best one, and I am here to receive suggestions from any who have had experience in this work.

Prof. RADDATZ of Baltimore City College, then said:

"On the whole I certainly agree with the views of Prof JOYNES, set forth in his most ably written essay, yet there is one point particularly in which my experience as a teacher of German has taught me differently. I should have said a few words yesterday but all further discussion of the subject was suddenly cut short by some one pronouncing the study of modern languages the veriest nonsense. Prof. JOYNES in speaking of the elementary work in teaching modern languages at our higher institutions of learning seems to me to lay too little value upon the writing of exercises in the beginning. I hold that the mastery of a vocabulary is a factor in elementary instruction fully the equal of any other part and

nothing according to my idea is so powerful in promoting this as the writing of translations, particularly from English into the language to be learned. I found that very soon and with little effort my pupils began to read intelligently easy extracts from literature and this led to a retaining of phrases which applied in an attempt to ask questions in the foreign language very soon established some confidence in their powers of uttering it. This with a little application resulted later in a tolerably ready use of the language for communication. It certainly verified my opinion that no matter where a modern language is taught—unless intended as a means of philological comparison only—the methods of bringing the pupil as early as possible to the practical part, *i. e.*, to speak and write, are most important and to these I maintain the writing of exercises belongs. I think a neglect of this part of elementary training shows itself frequently in the inability of young men, otherwise proficient in a foreign language, to write even the smallest composition without a strong admixture of Anglicisms."

At the close of the session Prof. RADDATZ made the following motion which was adopted:

"In view of the simplification and greater unity in German orthography recommended by the conference of German philologists, representatives of publishing firms and the book trade, called together at Berlin in last January by the Minister for Education in Prussia, and in view of the fact that these recommended improvements are at this moment to a great extent adopted by the schools of that monarchy and will be ultimately by the whole German empire, I would ask this department of the National Educational Association, through its presiding officer, to give expression to its willingness to corroborate this desirable reform by appointing a committee of eleven (11) professors and teachers of German including Prof. W. D. WHITNEY of Yale, and Prof. EDWARD S. JOYNES of Vanderbilt University, to suggest to the leading publishing firms of German school books in America such changes in spelling, type, etc., in their future editions, as the committee may deem necessary in order to make American school books for the study of German conform in orthography to those of Germany."

Prof. JOYNES replied to the objections presented to his paper, in a short but effective speech.

The Department then adjourned.

Third Day's Proceedings.

WEDNESDAY, JULY 12, 1876.

The Department met at 11:30 A. M., Col. WM. ALLEN, Principal of the McDonogh Institute, was requested to act as presiding officer. The ex-

ercises of the Department were opened by an essay from Prof. WILLIAM M. THORNTON, Adjunct Professor of Applied Mathematics, University of Virginia, upon the

POSITION OF MODERN MATHEMATICAL THEORIES IN OUR HIGHER COURSES OF PURE MATHEMATICS.

If the English-speaking mathematician could accept the dictum of Charles Dupin, that progress in Science is true only when it reacts on the elementary treatise, and should judge from this point of view the achievements of the grand geometers of our century, he would be logically brought to a conviction as dismaying as surprising. His examination would bring to light an innumerable host of text-books. But in the expounders of a science which boasts of peculiar lucidity and irrefragable logic, he would find for lucidity contradictions and confusion, for logic bare assumption and vicious argumentation. In all the crowd of geometries he would find that what was true was not new but old as Euclid and Archimedes, while what was new was not true. In the mob of Algebras he would find only vain attempts to disguise poverty of matter by an overplus of impossible examples, to make mathematical athletes of boys in their teens, to fit on youthful Davids the ponderous armor of Saul. If he should consider the results of this teaching when the student approached the applications of Mathematics he would find his severe judgment only too fully confirmed. The natural philosopher would tell him of pupils whom five, six, or seven years of training in pure mathematics had left incompetent to handle a simple question of Functional Analysis or grasp the most elementary theorems of Physics when clad in mathematical symbols or penetrate beneath the worthless garment of x's and y's, of series and cosines, to the divine truth of nature which they contained. The Engineer would boldly choose as his standards the Elements of Euclid and the Universal Arithmetic of Newton, and fling overboard all the pitiful compilations of a newer date. It is the business of the present paper to offer a scheme for reconciling these diverse interests: for satisfying the claims of pure science, answering the necessities of the Natural Philosopher, and equipping for his work the Engineer.

The elementary Mathematics present to us, as it were, two currents flowing side by side yet clearly separated: appealing to distinct intellectual sympathies yet acting and reacting each on the other. On the one hand we have Geometry and a series of illustrious names from Euclid to Chasles; on the other Analysis and an equal series from Diophantos to Sylvester. The first finds the origines of its history in the beginnings of civilization, and traces its descent from Egyptian through Greek, Arab, and Italian, to our own day. The second of more recent growth shows the first movings of its current in Diophantos, rushes through some underground channel to reappear in the Hindu, is filtered through the Arab into Spain and Italy, gains new volume and strength in Vieta, and thence forward domineers the stream. The conception of the infinitesimal as embodied in the mechanism of the Infinitesimal Calculus added

the last weapon to the armory of the geometer: the successors of NEWTON and LEIBNIZ had only to complete the conquests of their intellectual ancestors.

When we endeavor to untangle the currents which form this broad stream and trace them back each to the fundamental notion which is its spring, three conceptions present themselves appealing each to its own class of intellects, numbering its own force of workers, elaborated into its special department.

The first of these departments deals with symbols, and the operations performed on them irrespective of their representation. It is the Pure Mechanism of Analysis. Guided by Peacock's principle of the permanence of equivalent forms [a principle which has met with universal acceptation explicit or implicit] it develops in orderly succession from the simplest definitions the theorems of Algebra proper, Goniometry, and the Infinitesimal Calculus. I know of no treatise except Peacock's, in which this point of view is adopted and steadily maintained. Sporadic examples may be found as in the treatment of Indices, the definition of imaginary exponentials; but the treatise has yet to be written which will show the wonderful articulation of the whole system, and explain the true grounds of its development. But this treatise will yet be written; for the principle itself has obtained universal acknowledgment simply in virtue of its own intrinsic value. Witness the lucid statement by DURÈGE in the Introduction to his Theorie der Functionen einer complexen veränderlichen Grässe. "The external consecution and internal harmony in all the parts of Mathematics is due to strict adherence to this axiom, that in subjecting a newly-introduced notion to established operations, the fundamental laws of these operations are assumed to be permanent in application to the new conceptions. This really arbitrary assumption may be carried out as long as no contradiction arises from it."

In the second of the three departments the notion of the continuous variable is fundamental and the orthodox method of treatment is the method of limits. Quantitates infinitæ, says Gauss, in ratiociniis analyticis eatenus admittendæ sunt, quatenus ad theoriam limitum reduci possunt. And the names of Gauss and Cauchy have consecrated the formal employment of a method with the fundamental principle of which no geometer has ever been able to dispense. But it was not the variable of Euler with which they dealt. These two, GAUSS the German "princeps mathematicorum" and CAUCHY the "chief ornament of the French Academy," in creating the theory of Functions of a complex variable laid the corner-stone for the edifice of modern Analysis. It is in the province of the historian of pure mathematics and beyond the scope of this paper to trace the development of this notion. Its first dawn in the mind of JEROME CARDAN gave place to the fuller light of GIRARD'S quantités envellopées. WALLIS called them imaginaries. DE MOIVRE, JOHN BERNOULLI, the two FAGNUNOS, D'ALEMBERT, and EULER used them as keen and ready tools. But it remained for GAUSS and CAUCHY to throw a clear light on their true nature and give validity to processes which had before appeared a sort of clever jugglery. The pages of CAUCHY'S Analyse Algébrique and of the famous Exercises prove the power of the new analysis in the

hands of such a master. Like GOLDSMITH in literature, there was no part of our science that he did not touch, and none that he touched did he fail to adorn. He reorganized the so-called Theory of Equations, and compressed into a single Theorem all its fundamental truths. He constructed on a sure basis the entire Theory of Series, and left it in such completeness that the genius of an ABEL could add nothing to what he had written. He created the calculus of Residus, that giant calculus which dwarfs all others into pygmies. He brought the penetrating gaze of his genius to bear on geometry, and in its most familiar theorems discovered rich mines of new truth. The impulse which he communicated is still felt in all the parts of the science, and the boldness of his methods, the lucidity of his style, the rigor of his logic have penetrated and permeated the most remote branches of Analysis.

The third of these departments deals with the notion of number. Although the most ancient it is at the same time the subtlest, and has taxed the intellects of analysts from DIOPHANTOS to DIRICHLET. It bears the delusive titles of the Science of Number, the Higher Arithmetic, or Arithmology: but that student need be master of all the weapons of analysis who attempts its arduous paths. Yet for disciplinary value, for intrinsic beauty, for unity of development, it ranks among the first, if it be not first, of all the branches of Analysis.

When we submit to a similar examination the constituent parts of Geometry with a view to eliminate the ruling conception in each from the mass of details we discover here also three clear-cut divisions.

The first is the older or Euclidean Geometry, the product of the genius of the Greek. In the hands of EUCLID, APOLLONIUS, and ARCHIMEDES it attained its full development, perfected its methods, and completed the chain of its theorems. The force of SIMPSON, the genius of LEGENDRE and CAUCHY, the keenness of DE MORGAN have done but little to modify the one or increase the number of the other. As an historical product it is worthy of the profoundest study, for disciplinary value it stands unrivalled by language or literature, science or art; while its serene beauty, its marvellous symmetry, the strange articulation of all its parts into an organic whole have won for it the homage and admiration of every rank in every age.

When we pass to the second of the three departments, the modern synthic Geometry, we turn as it were from an antique statue to a modern painting full of the warm hues of life. The one stands before us serene and unchangeable, the product of genius working under stern limitations. Its outlines are clear and sharp as those of a Greek temple. It rejects the infinite and deals only with the finite; it disallows the imaginary and deals only with the real; it scorns vagueness and generality and becomes the great teacher of precision. The other is like the Gothic cathedral whose spires shoot into infinity; it embraces in its frame the imaginary; it aims at the utmost generality. The same characters which differentiate ancient literature and modern, ancient art and modern, strangely enough differentiate ancient Geometry and modern. And as no modern has been able to revive Greek drama or Greek sculpture, so no modern has been able to give to the lost treasures of Greek geometry aught but a gal-

vanized vitality. The attempt of CHASLES to restore the lost Porisms of Euclid is the saddest requiem over them that man could have penned. But it is fortunate that the claim of this illustrious geometer to honor does not rest on such a vain impossible undertaking. The Géométrie Supérieure, and the Sections Coniques are rivalled only by the barycentrische Calcul and the Kreisverwandtschaft of MÖBIUS and supplanted by no existing work. The unity of its method, the lucidity of its proofs, the wide-reaching generality of its views, the classic beauty of its style commend the Géométrie Supérieure to the attentive study of all ages. But the modern Geometry does not confine its growth to the pages of CHASLES, MÖBIUS, STEINER, or STANDT and PONCELET. In them it developed its own grand organism, and by the theory of Involution included the Geometry of Measure in the Geometry of Position: then continued its impulse and is now busy with the task of reorganizing the descriptive geometry of MONGE, and introducing into his constructive system its own generality, simplicity, and uniformity. It has reformed the whole department of Graphics and made it the resource of the Physicist and the Engineer in the most complicated problems. It has impregnated with vitality the theorem of the Polygon of Forces, which falling unnoticed from the pen of LAMI, in 1687, after the lapse of nearly two centuries has given birth to the science of Graphical Statics. The Cartesian convention of signs [in fact the natural product of the principle of permanence] which had been usurped by Analysis from the time of DESCARTES, in the grasp of BELLAVITIS, has enriched the elements with the Theory of Equipollences and put within the reach of the tyro the subtlest problems of the Ancient Geometry. The directive power of the imaginary, a power dimly foreseen by KUHN a century before (1750), Sir W. R. HAMILTON has developed into the calculus of Quaternions.

The third division is based on the convention of DESCARTES embodied in the system of Coördinates which bears his name, is equipped with all the weapons of a highly-developed system of Analysis and armed with the methods of the Modern Geometry. As we likened the Euclidean Geometry to an antique statue and the modern Synthetic Geometry to a modern painting we may complete the parallel by likening the Analytical or Coördinate Geometry to a modern engine. Its beauty is the beauty of incomparable fitness for its work, its simplicity is the simplicity of uniform and unvarying action, its gigantic power makes possible for the beginner in science the solution of problems which foiled the giants of an earlier epoch. "The analytical method," says CHASLES, "on account of its universality should be prescribed by preference if not universally." "Let us not be dazzled," says LAMÉ, "by the simplicity, the lucidity, the elegance of certain purely geometric demonstrations into substituting them for those analytical methods which in reality detected the theorems enunciated and which if properly presented are equally simple, equally lucid, equally elegant."

Having completed this swift survey of the broad field of mathematical science and separated its characteristic elements we have next to define the extent of the course of mathematics. The twofold object of such a course is this:—to afford the student a clear, systematic view of all the

branches of pure mathematics and to enable him to acquire so much of familiarity and dexterity in the use of its algorithm as will enable him to read fluently and with intelligent appreciation the original writings of the great masters of our science. The one of these objects fixes the extent of the theory to be expounded; the other prescribes the necessary amount of illustration. The second requirement will vary with the pupil; sufficient provision having been made it must be left to the intelligence of the teacher to increase or diminish or alter this amount. The first requirement however is fixed by the nature of the science and a brief mental review enables us to eliminate from the general classification of the mathematical sciences those branches which are fundamental. They are as follows:

Analysis.	Geometry.
Algebra.	Euclidean Geometry.
Algebraic Analysis.	Trigonometry.
Infinitesimal Calculus.	Analytical Geometry.
Arithmology.	Modern Synthetic Geometry.

Such are the departments which must be elaborated in every complete course of pure mathematics. The omission of any one of them leaves a gap which nothing can fill: the insertion of others would simply repeat principles already developed. And finally the mastery of the fundamental principles of these branches will leave the student prepared to cope with any mathematical treatise which may be presented to him. He need shrink not even from the great mathematical poem of Laplace, the Mécanique Céleste.

The defect of the courses of mathematics now taught in our schools, colleges, and universities is twofold. On the one hand in the exposition of the theory they are strangely blind, fragmentary, and illogical. On the other in the illustration of the theory they vainly attempt to atone for the first defect by a great excrescence of exercises and examples whose fatuous absurdity fills the mathematician with amazement and the student with dismay. "They bind heavy burdens and grievous to be borne and lay them on men's shoulders; but they themselves will not move them with one of their fingers." It would be an invidious task to single out any special treatise and expose in it defects which are well-nigh universal. It may suffice to say that after examining all the American works on algebra which have met his eye the reader of this paper has been unable to find one in which the whole theory of series was not erroneously presented, and this though the Analyse Algébrique was published more than fifty years ago [1821]. The compilers of text-books on the Elements of Geometry escape SCYLLA only to fall into CHARYBDIS when they endeavor to graft on the Euclidean stock the generality of modern methods. It is in the popular manual of the Infinitesimal Calculus

that we reach the height of confusion. Rival theories contend for dominion in the mind of the author, and his work by its fragmentary nature reveals at once his incompetence and his total ignorance of all the prerequisites for the task. Although there is a school of analytical mathematics now dominant in the scientific world; which had for its apostles GAUSS, CAUCHY, ABEL, DIRICHLET, and all the famous geometers of our century which numbers among its adherents the schools of Great Britain, France, Germany, Italy, and in short of all Europe; whose methods and definitions and notations are by common consent of mathematicians irrevocably established: yet these compilers ignore its very existence, discard its methods for others that are false and obsolete, reject its notations and replace its definitions by the vagaries of their undisciplined brains.

Happily for the the repute of this and similar Associations throughout our country, the rapid advances of the past few years in the arts and implements of teaching encourages us to hope that the work necessary to remove this stigma will soon be done. In the opinion of the reader it would be easy for an author who possessed the gift of incisive expression and judicious condensation to compress within two volumes (one devoted to analysis, the other to geometry) the whole of our course of mathematics. And this done it would be possible for a student of average intelligence and the maturity of mind necessary for mathematical studies, to complete this course in three, or at most four years. The abundant materials for this course are already at hand in the classical writings of those illustrious geometers who have adorned the science, and the famous journals which have been the repositories of scientific discoveries.

When he has led the student thus far the teacher's work is at an end; and perhaps it is beyond the province of this paper and of this body to go further. But the Association will pardon me if I go on to say, in view of the recent establishment in this city of a University of higher aim and wider scope, that here we find the beginnings of the true work of the University. The study of the Elements having equipped the student with all the tools of the geometer, he will find abundant material to exercise them on in the manifold branches of the higher analysis, of the higher analytical geometry, the delicate investigations in the theory of Number and the theory of Quaternions. The same course also which has prepared the student for the higher investigations of pure mathematics has equipped him to pursue the various theories of mathematical physics, of theoretical mechanics, and of physical astronomy. It is in all these subjects that the modern mathematician finds the incentives to original research and the materials on which to work.

Prof. W. C. SAWYER then presented a

REPORT ON ORTHOEPY.

Your committee has found the field upon which they were desired to report, so wide and full of interest as to compel the entire omission of some topics of great orthoëpic prominence among the philologists of our *day.*

We have chosen, therefore, to notice only those subjects which are of the highest practical interest to us as educators. In this relation we regard the Orthoëpy of our English speech of unquestionably the highest importance; that of the modern European languages, with their living literatures and their moving millions, we estimate as second. The classical and oriental languages are of less vital importance either in the common or the higher education though all languages are dependent upon the science upon which we are now engaged.

The correct pronunciation of words is a matter of prime importance to the culture of any people and may serve as a measure and index of refinement. In Europe we find many dialects of the same language, varying with the rank and culture of the people as well as with the locality. In the United States no such strangely-marked dialects prevail anywhere. The conditions favorable to the growth of dialects are wanting among us. We have no caste to divide us and there is so much communication between different parts of the country that local peculiarities of utterance become almost impossible. This National Educational Association and the various other means of bringing together teachers and other educated men, for consultation, and of calling them from one section of the country to another, are forces against which provincialisms can make but little progress. The peculiarities of speech often met with in this country are usually the characteristics of families and of foreign nationalities rather than of communities or states; and they never occasion any difficulty of understanding even the most uneducated people, except foreigners like the Pennsylvania Dutch who have not yet fairly learned the language of the country. But no familiarity with the best Parisian French, or Hannoverian German will enable one to converse with the average citizen in all parts of England, France, or Germany.

Mr. ALEXANDER J. ELLIS, in speaking of American pronunciation, does not pretend to decide whether we speak better or worse than the English, but declares that we reveal our home, even the most English of us, by some chance words, as, for instance, the word *trait*, of which the English still retain very nearly the French pronunciation. Nevertheless he maintains that our American pronunciation as compared with the English is archaic. We have no other present interest, however, in this comparison than to show that good "English" is not altogether the same thing in England and America, and, for the sake of avoiding confusion to impress the necessity of confining our research for the actual orthoëpy of our own speech to the best usage of American scholars. It is, of course, very desirable that American and English usage should coincide, but the, fact remains all the same that if an American orator should speak of a "*trā*" of character, affectation would be set down as the most conspicuous trait of his own.

We may seem to take very little interest in Orthoëpy since we teach it so little in classes formed for that purpose; but it should not be overlooked that we have no classes formed for any purpose, in which we are not constantly impressing a correct or false utterance of some language; and in the present state of orthoëpic science who can be sure that either his example or his precept can be safely followed?

Just here we find the chief claim of this subject upon our attention. A great obstacle, insurmountable to the individual, lies in the way of correct and assured utterance in almost every language living and dead. Careful scholars feel this embarrassment even more than the careless. They may consult and compare authorities, but they find evident discrepancies on the one hand, and on the other an ever-present uncertainty of the meaning of the orthoëpist, except in presence of his living voice. Philology suffers no other disability at this time to be compared with this lack of all means of definitely representing sounds upon paper. The most popular way of showing the pronunciation of words is by saying that the sounds of certain doubtful letters are like the sounds given to the same or different letters in other words which are supposed to be better known. But, as Mr. ELLIS justly remarks, this "involves the very riddle which we have to solve. Any improper pronunciation in the key-word will of course be perpetuated in the word to be explained. Thus the *a* in *calf* would not serve any good purpose as a standard sound in any orthoëpy because it would be variously interpreted. Mr. ELLIS has also shown what we have all doubtless felt, that the description of sounds as hard, soft, thick, thin, full, broad, etc., is of little value on account of the variable use of these terms in their abnormal or secondary applications. It is impossible therefore at present for us to learn Orthoëpy without the living teacher. But there are no living teachers who can speak with much authority, themselves all having lacked competent teaching, especially in the dead languages. We can hardly guess how Cicero's orations sounded in the ears of the Romans. Modern European languages we can study from the living tongues if we will go far enough for the privilege. It is not a rare thing for American scholars to study French and German several years in this country till they can read and translate them very easily, and then discover that they can neither understand a single sentence of those languages as pronounced by the natives, nor make the natives understand a sentence of their pronouncing. It is a remarkable result of a similar cause that at Pekin they understand the writing but not the speech of Canton.

Who can estimate the burden of such disabilities imposed upon Philology either by a cruel fate or by a stolid indifference on our own part? This difficulty of recording any speech, our own or foreign, is a great hindrance to all intellectual growth. The natural expression of thought is by the sounds of the voice, but we learn much more through the eye than through the ear. What we read is only the sign of language proper, and is two removes from the thought itself. Whatever complicates, therefore, or confuses the immediate suggestiveness of this sign, cumbers the thought by so much and makes writing so much weaker than speech.

We now come to the inquiry for the root of this evil. If the elements of writing had definite significance their combinations would be equally significant. The ultimate elements of writing are the letters of the alphabet. We cannot now dwell upon the defects of this wonderful instrument. Merits it has none that are noticeable among its conspicuous blemishes. A sentimental English writer says, "the uses of the *alphabet are* sweet and marvellous." The marvellousness is only too ap-

parent, but we suspect there is some mistake about the sweetness. In short the alphabet consists of twenty-six letters, which signify nothing in particular and sometimes nothing at all as individual elements; but which in capricious groups represent the words of our speech. It contains nothing systematic and nothing exact. It was barbarous in its origin and is barbarous in its character. Before printing was invented it is supposed that men represented as well as they could with such an alphabet the words which they heard or would themselves utter, but that the inadequacy of the instrument made the representation necessarily very incorrect and incomplete.

With printing came fixed orthographies into use, and now the letters and their grouping have acquired a sacred character in the eyes of many, who dare not violate them, at least when they know what they are. According to Mr. ELLIS, printed books generally represent not the orthography of the man of education, who writes, but only of the man of routine, who prints. "Our present standard orthography," he assures us, "is simply typographical. * * * It is a tyrant in possession. It has an army of compositors who live by it, an army of pedagogues who teach by it, an army of officials who swear by it and denounce any deviation as treason. An army, yea, a vast host, who having painfully learned it as children cling to it as adults, in dread of having to go through the awful process once more, and care not for sacrificing their children to that Moloch, through whose fires they themselves had to pass, and which ignorance makes the countersign of respectability." "Our present standard typographical spelling," he adds, "is a monstrous misshapen changeling, a standing disgrace to our literature."

Professor F. J. CHILD very justly remarks that "Nothing can be more absurd than the veneration felt and paid to the actual spelling of English, as if it had been shaped by the national mind, and were not really imposed upon us by the foremen of some printing-offices." If, therefore, any remedy for these great orthoëpic and orthographic embarrassments can possibly be found, there is no good reason why we should not avail ourselves of it.

Is there, then, any remedy? This question cannot be fully answered, and the demonstration made satisfactory to all in any hasty and brief examination of the subject. Enough, however, can perhaps be said to indicate the direction of the solution. We have shown that the chief obstacle to the progress of Orthoëpy and Philology generally lies in the want of any exact symbols with which to record the sounds of the human voice. Can the lacking symbols be provided? The conditions of the case demand that they should be phonetic, and represent definite sounds without variation.

In 1843, Mr. ISAAC PITMAN suggested the introduction of phonetic writing and printing into general use. Very soon thereafter he was joined by Mr. A. J. ELLIS, whose phonetic studies have since been very fruitful, and, in 1846, they together published a phonetic alphabet consisting of forty characters composed of Latin letters and their modifications. These letters were systematized and certainly were a great improvement on the old alphabet. More recently Mr. PITMAN has made some modifications

in the forms of his letters, and Mr. ELLIS has invented an excellent method of representing all the sounds of the voice by the use of the old letters with fixed powers, using to make up the number to about three hundred, such combinations and inventions as would be most suggestive. With these all the languages taught in our schools can be very accurately represented to any person who is acquainted with the powers which Mr. ELLIS would have his symbols represent. This alphabet, however, was never designed for general use, and is clearly unfit for it though serving very well the purposes of science. But why cling to the old alphabet if anything exact is required? Dr. BRÜCKE, who has carefully studied the physiology of speech, finds no reason for attempting to repair the defects of the old alphabet rather than produce one altogether new, except simply to save labor at the start, if even that is possible, and he thinks we ought not to be frightened at the cost of a luxury which is destined to be of incalcuable advantage for centuries. Moreover, letters fashioned after the old, but with new powers, are not received with favor, and their abandoned uses must occasion some confusion till new habits have been formed.

The invention of talking-machines has exposed some phonetic fallacies, and confirmed or suggested some scientific facts. KEMPELEN and WILLIS have discovered, by mechanical experiments, so many of the conditions of the various tones of the voice as to be able to counterfeit them with remarkable success through artificial appliances. All our tones are produced by an equally-exact adjustment of the various parts of the talking-machine of nature. The adjustment is in part voluntary and in part unconscious except as we know it by the phonetic products. There is good reason to hope that we may soon know *how* we talk, and that the query ridiculed by MOLIÈRE may be proudly answered, and that we may learn at last what he could not guess nor see the use of knowing, viz: "what we do when we say *o*."

Dr. BRÜCKE suggests that the new characters shall indicate the position and action of the organs of speech, and thus acquire absolute and unvarying significance; but he does not propose any specific characters, for the conscious lack of typographical, artistic, and philological skill. Dr. BRÜCKE's work was published in Vienna, in 1856. In 1864 Mr. A. MELVILLE BELL, a professor of vocal physiology in England, claimed to have discovered the organic relations of speech sounds, and published a universal alphabet called "Visible Speech," based upon the discovered principles. These symbols show the part taken by the lips, the tongue, the uvula, and the vocal chords in each sound. Mr. ELLIS speaks in the highest terms of this system, and compares his Paleotype and his Glossotype to it in order to fix the powers of his letters. Professor S. S. HALDEMAN is also among the endorsers of Mr. BELL's system.

The practical value for common use of the physical basis of voice symbols may easily be overestimated. We have seen the worthlessness of key-words to describe the pronunciation even of our own day, but after the language has passed through several transformations they are still less available. Mr. ELLIS appreciates Visible Speech, the more highly because it not only records for present use a complete description of every sound we utter, but leaves in every written word a permanent record for all

time of the pronunciation of the present age. Such a system introduced in CHAUCER's time would have saved Mr. ELLIS years of research in the Early English Pronunciation, and given results which now are impossible. Professor W. D. WHITNEY, however, has raised the question whether, when Mr. BELL makes a scratch on paper and utters a sound intended to be signified by it, we cannot reproduce that sound equally well whether or not the sign represents an exact phonetic analysis? In our opinion people generally will imitate the voice *better* than any verbal or pictorial representations; but we have known many instances in which the latter have been an indispensable aid in teaching a correct pronunciation. We conclude therefore, that the representative character in the symbols can be spared without great loss, provided we preserve as sacredly as a standard of weights and measures an exact description of the power of each written symbol for the benefit of the historians and teachers of the languages.

The question will now arise whether an exact alphabet would be of much value while we do not agree how to pronounce our words. Mr. ELLIS says, "the only chance of attaining to a standard of pronunciation is by the introduction of phonetic spelling." We must teach some pronunciation for all our words, and we may as well be forced to agree upon some form by the introduction of exact symbols.

When such a reform has been accomplished any one who has mastered the alphabet will be able to pronounce correctly all written words of all languages. This may seem too great a gain to be practicable, but we can never fully appreciate the advantages of such a reform till we consider that the natural effect of all reading will then be to correct all bad habits of pronunciation. The reading man will then be able to pronounce *chasm* as though it were written *tshazm*, as we have heard it from the pulpit, or to insert a French nasal in the word *cow*. Our speech will then gradually conform to the best standards and in a generation or two become beautifully uniform.

The objection has been made that such a change would destroy etymology. But instead of this it is plain that the defects of the present spelling embarrass etymology. Mr. ELLIS says, "the only true etymological spelling which can be conceived is one that is strictly phonetic." and "on the ground of philology alone we can truly say there is no etymology without phonetics."

Others say they do not want to have to learn to spell again. Benjamin Franklin replied long ago to this objection by assuring the objectors that they would have less to do to learn the ideal alphabet and spelling entire than to finish the spelling they had begun. This is unquestionably true, since an exact alphabet will require no other learning to spell than simply to learn the powers of the letters and to know how to talk, *i. e.*, pronounce correctly. Orthography, the lowest of philological pursuits, will then be replaced by Orthoëpy, the highest. Only a minute fraction, however, of the time now given the former will be required for the latter. A balance of several years will be left over to be applied to neglected branches or to productive industry.

Reading and elocution are too much neglected in the schools of to-day.

The greater part of what goes by that name is simple practice in spelling, or learning to recognize the words of our speech at a glance under the disguise of their capricious orthography. All this, of course, must precede elocution proper, and the former never being finished, the latter never begins. When the obstacles are removed we can well afford to give more attention to the art of CICERO and DEMOSTHENES, of CLAY and WEBSTER.

Are we then ready to consummate this dream of LEPSIUS and FRANKLIN? Probably not. We have many questions to settle before we can carry out so grand a phonetic reform involving popular co-operation. Our immediate work is with phonetic science, which is still in its infancy. According to Professor WHITNEY, "A thorough understanding of the mode of production of alphabetic sounds and of their relations to one another as determined by their physical character, has become an indispensable qualification of a linguistic scholar. And he who cannot take to pieces his own native utterance and give a tolerably accurate account of every item of it lacks the true foundation on which everything else should repose." These reasonable conditions are met by only astonishingly few at present; but their number is increasing. When phonetic science is sufficiently advanced, then we may safely attempt the formation of the new symbols. And when we have spread some knowledge of phonetic science throughout the country, and have adopted the simplest, most graceful, and most easily written and printed symbols that can be devised—then we anticipate that the people will be even eager to adopt a reform that can save them both time and money, as well as promote all intellectual and literary growth.

It is not necessary that we should complete the analysis of all languages before we put our own into its new dress. We may doubtless prudently adopt the characters needed for our own English, without limiting the power of the system to expand and cover all the capabilities of the human voice as fast as the extension shall be called for, either for scientific or more practical purposes. We ought to move forward in the most direct line toward the reform in America. If all the world gets ready as soon as we, we can start together. The difficulties need not be removed except as we come up to them. There is no danger but we shall find them all. If we do thorough work it will stand forever, and whenever we arrive at the goal we now contemplate, we shall unquestionably reproach both ourselves and our fathers that all our literary men used an instrument far clumsier than the wooden plow and the cross-bow in the age of steam and electricity.

Dr. HAGAR of Massachusetts, then introduced Rev. E. JONES, B. A., of Liverpool, England, who addressed the Department upon

PHONETIC REFORM.

This morning a copy of a magazine called the "Galaxy" was placed in my hand. Of this journal I know nothing, never having seen or heard of it before, but from its appearance it seemed to be a respectable publication.

I found an article on Orthography under the signature of RICHARD GRANT WHITE. Of this gentleman I know nothing whatever. On reading the article I said to myself, "If this be a respectable journal and R. G. WHITE a writer in whom the American people believe, if these are their prophets, and if such be their teacher, Heaven help them, say I!"

The whole burden of the article is just in this strain. "It would be very inconvenient for persons who have learned the present spelling to change their habits. Then this idea is developed and the proposed reform is burlesqued and caricatured in a manner most unworthy of a writer seeking the truth.

With regard to Spelling Reform in England there was a very general disposition to discover some solution of the problem which would not necessitate the introduction of New Letters in large numbers. Mr. ELLIS has shown this disposition by his proposed Glossic. Mr. PITMAN has weekly specimens of various plans of spelling by sound without New Letters in his Phonetic Journal.

It would appear that the following conditions were indispensable to the success of any scheme of Spelling Reform among the masses of the population. (1) That the New Spelling should be easily readable by those who can read the old. (2) That the New Orthography be such as can be taught to children in reading and spelling in a fraction of the time now spent upon them. It was maintained that all this could be done without the introduction of new letters at all. For example the Phonetic system would spell each of the following words, which never give any trouble in reading or spelling to learners, with two new letters each: *chain, sheep, thing, shoot, shout.* Now if the combinations *ch* were invariably kept to the sound in *chain*, there would be no difficulty in teaching reading and spelling and so of the other combinations. This principle of digraphs or combinations of two letters to represent one sound is found in many languages such as the German, the Welsh, and others, whose spelling is almost entirely phonetic.

The following paper by Dr. J. M. GARNETT, of Annapolis, Md., is not alluded to by the Secretary as having been read. It was probably *not* read. The place for it in the programme was immediately after Prof. SAWYER'S Report:

THE STUDY OF THE ANGLO-SAXON LANGUAGE AND LITERATURE.

Considering the position which the English language holds at the present day—the wide extent of territory over which it is spread, the political importance of the two great nations by whom it is spoken, and the unrivalled literature which is enrolled in it—one would suppose that the historical study of the English language and literature would form a prominent subject of instruction in every higher institution of learning in Great

Britain and the United States. But what is the actual state of the case? Continual complaints come to us from abroad that so little attention is paid to this study in the schools and universities of Great Britain*; and as yet but few collegiate institutions in this country have made it a necessary part of their courses of instruction, or even afforded an opportunity for its pursuit, although the study of the language and literature is at least making its way into the curricula of some of our colleges and universities, the study of the older forms and works is limited to but few; and we are still taught that our language and literature begin with CHAUCER, or perhaps with SPENSER and SHAKESPERE, and the former of these two some would even exclude.

We are not concerned here with the terminology of the periods of the language, and think it a matter of small consequence whether we adhere to the old names of Anglo-Saxon, Semi-Saxon, and Early English, or, with some of the leading scholars of England, adopt other designations. The trouble is that these scholars are not at one among themselves, and until they agree upon some simple, distinctive terminology, we prefer to stick to the old names.† Whatever terms we adopt, the important point is that we should recognize the continuity of the language and literature, its growth and development into its present modern forms by external and internal influences—that there has been no displacement or obliteration of the old building, but a constant modification of the structure erected upon the same original granite foundation, which has held its own for over a thousand years, and, as far as we can see, bids fair so to do for a thousand years to come. However scholars may differ as to terms, all are agreed that there can be no historical study of English without a knowledge of its oldest forms, that is, of the Anglo-Saxon language itself.‡ It is of no use to start any lower down in the series. Unless we make a knowledge of this language the basis of our studies, we are building on the sand, or rather we are building without any foundation at all, and shall, at every step, meet with difficulties which it is impossible to overcome, but having once acquired this knowledge,—which, with the numerous helps ⁑ existing at the present day, is in the power of every one—we have gained a starting-point, from which our inquiries may branch out in various directions, and we may rest assured that we possess the key to unlock many of the difficulties in our path.

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*In the Journal of Education (London) for April, 1876, we find a synopsis of the Report of the Syndicate appointed by the Senate of the University of Cambridge in the Easter Term, 1875, "to consider the requirements of the University in different departments of study." The Syndicate append a communication signed by several Professors and Tutors in the University, among others Rev. Walter W. Skeat, of Christ's College, noted for his studies in early English, which concludes: "The claims of the English language and literature upon an English University are so manifest that we content ourselves with recording the fact that there exists in Cambridge no chair of English, ancient or modern. Mr. Skeat has also addressed a voluminous communication, urging the necessity for the University to provide some teachers and encourage the study of English.

†See Professor March in Transactions of the American Philological Society for 1872, and Professor Lounsbury in the New Englander for January, 1876.

‡See Thorpe in Preface to Pauli's "Life of Alfred the Great," p. vi.

⁑See the Manuals of Thorpe, March, Corson, Shute, and Carpenter.

To MATTHEW PARKER, Archbishop of Canterbury, students of English owe a debt of gratitude which we can scarcely overestimate. To him primarily is due the revival of Anglo-Saxon learning in England soon after the accession of Queen ELIZABETH; and this revival had its origin in the Reformation of the Church. We cannot, perhaps, attribute to the worthy primate altogether unselfish motives in his desire to disseminate a knowledge of the principles and practice of the Anglo-Saxon Church. Being a married man, he naturally desired to defend his position—which was not favorably regarded by the Queen,—by an appeal to the views of the early church on the celibacy of the clergy, and in 1562 he caused to be reprinted a work entitled "A Defence of Priests' Marriages, established by the imperial laws of the realm of England," in some copies of which work are additions by himself—if, indeed, he was not the author of the work—and "some of the allegations are set down in the Saxon tongue.* This is the first printed specimen of "the Saxon tongue" known to exist; for the statement that the monks of the abbey of Tavistock in Devonshire had a font of Saxon type and printed a Saxon Grammar and other works, rests on tradition alone. The first font of Anglo-Saxon type was cut by JOHN DAY, at the instance of Archbishop PARKER, and the first work published by him was entitled, "A Testimonial of Antiquitie, showing the auncient Fayth of the Church of England, touching the Sacrament of the Body and Bloude of the Lord here publikely preached and also receaved in the Saxons time, above 600 years agoe;" printed without date, but not later than 1567. This work was a homily of Aelfric, containing the doctrine of the Eucharist as received in the Anglo-Saxon Church, together with an English translation, and at the end the Creed, the Lord's Prayer, and the Ten Commandments in Anglo-Saxon, with an interlinear English translation.

This then was another point in which the Archbishop desired to make known the doctrine of the early church. There was still a third, the reading of the Scriptures in the vernacular, and in 1571 we find issuing from the press of JOHN DAY, at the expense of Archbishop PARKER, "The Gospels of the Fower Evangelistes, Translated in the old Saxons Tyme out of Latin into the Vulgare Toung of the Saxons, newly collected out of auncient Monuments of the sayd Saxons, and now published for testimonial of the same." The work contains also the English translation from the Bishops' Bible, and a preface by JOHN FOXE, author of the Book of Martyrs, in the form of a dedication of the work to Queen ELIZABETH. The publication of these works shows that the object of the Archbishop in the revival of Anglo-Saxon learning was to promote the reformed religion. But others, at that time, and previously, had devoted themselves to the study of the Anglo-Saxon language for the purpose of illustrating the history and antiquities of England, among whom were JOHN LELAND—royal antiquary to HENRY VIII—who made a great collection of Anglo-Saxon MSS. from the suppressed monasteries, and, we are told, "appeared

*Strype's "Life of Archbishop Parker," quoted in White's Preface to "The Ormulum," p. iv, and in Petheram's "Historical Sketch of Anglo-Saxon Literature," p. 32, from which works many of the historical facts stated in this article are taken.

to have been the first individual of the reformed faith who possessed a knowledge of the Saxon language.* JOHN Bale and ROBERT TALBOT, both collectors of MSS. and contemporaries and friends of LELAND. Later we find as promoters of a knowledge of the Anglo-Saxon language and literature, JOHN JOSCELYN, Secretary and amanuensis of Archbishop PARKER, who compiled the first Saxon-Latin Dictionary, JOHN FOXE, the martyrologist, who published the Anglo-Saxon Gospels, and LAWRENCE NOWEL, dean of Litchfield, who compiled a Saxon-English Dictionary, made a transcript of the Anglo-Saxon laws, collected many MSS., and taught Anglo-Saxon to WILLIAM LAMBARDE, record-keeper of the Tower of London. LAMBARDE, in the year 1568, published the first collection of the Anglo-Saxon laws, entitled, "Archaionomia, sive, De priseis Anglorum Legibus libri, Sermone Anglica, &c.," and accompanied with a Latin translation. Thus was a foundation laid by the scholars of the sixteenth century for the future study of the ancient language and literature of England.

As to the motives actuating these scholars in publishing the Anglo-Saxon works above-mentioned, Dr. WHITE remarks, in his preface to the Ormulum, "The selection of these works for the press out of the documents which had been collected,—distinguishes the first restoration of Anglo-Saxon learning as a testimony to the purity of the reformed faith, and a patriotic offering to the institutions of the Country."†

But little more was done for Anglo-Saxon learning during the remainder of the sixteenth century, so that WILLIAM CAMDEN, the historian, in the beginning of the seventeenth century, feared that, unless the labors of the learned gentlemen—who have just been mentioned—should be published, "devouring Time, in few years, will utterly destroy it without hope of recovery." CAMDEN himself, in his collection of English Historians, published at Frankfort in 1603, reprinted King ALFRED's Preface to his Anglo-Saxon translation of Pope Gregory's Pastoral Care, which had already been published at Leyden in 1597, in a work entitled "De Literis et Lingua Getarum sive Gothorum," and in his "Remaines concerning Britaine," published in 1605, CAMDEN gives a chronological series of versions of the Lord's Prayer, two of which are in the Anglo-Saxon language. RICHARD VERSTEGAN's "Restitution of Decayed Intelligence," also published in 1605, gives a collection of four or five hundred Anglo-Saxon words, being etymologies of names, titles, and offices, which is, perhaps, the first collection of Saxon words ever printed, and was used by SOMNER in compiling his Anglo-Saxon Dictionary.

But the second revival of Anglo-Saxon learning is ascribed to WILLIAM L'ISLE, who, in 1623, published AELFRIC's "Treatise on the Old and New Testament" with his Paschal Homily, already mentioned, and his epistles to Archbishop WULFSTAN and Bishop WULFSINE, which last had been published by FOXE, in 1570, in the second edition of his Martyrology. In his preface to this work L'ISLE gives us an interesting account (quoted by PETHERAM)‡ of how he learnt Anglo-Saxon. He says that he first

* Petheram, p. 27.

† White's Preface, pp. vi, vii.

‡ Petheram, p. 51.

acquainted himself a little with Dutch, both high and low, then he read awhile for recreation all the old English he could find, poetry or prose, of what matter soever; the more ancient the books were, he perceived they came nearer the Saxon. "But the Saxon, (as a bird flying in the aire farther and farther seems lesse and lesse), the older it was, became harder to bee understood." At last he lighted on GAWIN DOUGLAS's translation of Virgil, and though he "found that dialect more hard than any of the former; yet with helpe of the Latine he made shifte to understand it, and got more knowledge of that he sought than by any of the other." Next he read the Decalogue,—and reading certaine sermones of the foure Evangelistes set out and Englished by Mr. FOXE, so increased his skill, "that at length (I thanke God) I found myself able (as it were to swim without bladders) to understand the untranslated fragments of the tongue scattered in Master CAMDEN and others;—yet still ventring not far from the shore. At last waxing more able through use, I tooke heart to put forth and dive into the deep among the mere Saxon monuments of my worthtily respected kinsman, Sir H. SPELMAN, my honourable friend, Sir ROBERT COTTON, and of our Libraries in Cambridge. So far about went I for a guide, who now (thanks be to God) am able to lead others a neerer way." Such was the course one had to take two hundred and fifty years ago to learn Anglo-Saxon, when no Grammar or Dictionary had yet been published, or even made, and the works themselves had not yet emerged from the dusty shelves of the public and private MSS. collections. Sir HENRY SPELMAN and Sir ROBERT COTTON were the great collectors of that day. The MSS. collections of the latter now form one of the most valuable portions of the Library of the British Museum. The former devoted himself to collecting materials for illustrating the civil and ecclesiastical history of his country, and to compiling an Archæological Glossary, in the preparation of which he found the knowledge of Anglo-Saxon so necessary that he set about acquiring it, though at an advanced age, and was so impressed with its importance that he founded "a Saxon lecture" in the University of Cambridge. Bishop GIBSON, his biographer, in speaking of his reasons for founding this lecture, says:* "The revival of the old Saxon tongue ought to be reckoned a good piece of service to the study of antiquities. He had found the excellent use of that language in the whole course of his studies, and much lamented the neglect of it both at home and abroad; which was so general that he did not then know one man in the world who perfectly understood it." Sir HENRY allowed twenty pounds sterling per annum to ABRAHAM WHELOCK, the first incumbent of this "Saxon lecture" at Cambridge, and WHELOCK tells us, that upon Sir HENRY's advice and encouragement he spent the best part of seven years in the study of the language. It was intended that this foundation should be perpetual, but Sir HENRY SPELMAN and his eldest son died, the civil wars broke out, the estates of the family were sequestered, and they were prevented from fulfilling the design, so that WHELOCK and SOMNER were the only occupants of the chair. Although this "Saxon lecture" lasted so short a time,—and it does not appear that any lectures on the language

*Petheram, p. 54.

were ever delivered by the incumbents, but that they devoted themselves to the publication of Anglo-Saxon works from original MSS.,—yet it deserves notice as the first foundation of the study of the Anglo-Saxon language and literature. In the year 1640 Sir JOHN SPELMAN, the son of Sir HENRY, published the Anglo-Saxon Psalter, dedicated to Archbishop LAUD as a preserver of MSS., and a patron of the Saxon tongue. Archbishop USHER also promoted this study, and is said to have suggested to Sir HENRY SPELMAN the foundation of the "Saxon lecture," and to have recommended WHELOCK for the position. The first fruits of this lectureship were given to the world in 1644 when WHELOCK published "BEDE's Ecclesiastical History, with the Anglo-Saxon version of King ALFRED; and the Saxon Chronicle with his own Latin translation." He also published a new edition of LAMBARDE's Archaionomia, or Anglo-Saxon Laws; and promised an Anglo-Saxon Dictionary, but he died, leaving only a MS. collection of words from BEDE made for that purpose.

Passing over the names of Dr. MERIC CASAUBON, son of ISAAC, Sir SYMONDS D'EWES, Sir WILLIAM DUGDALE, author of the Monasticon Anglicanum, SELDEN, and others, who furthered Anglo-Saxon studies in one way or another, we come to that of FRANCIS DU JON, better known as FRANCIS JUNIUS, who was born at Heidelberg, in 1589, but came to England in 1620, and there spent a great part of his long life, dying at Windsor in 1677, at the age of eighty-eight. He was noted as a most diligent student of the Northern languages, but especially as the first to make known the Scripture Paraphrase of Caedmon, the first Anglo-Saxon poet whose name we know, which he published at Amsterdam, in 1655. The parallelism between MILTON's great epic and this work of Caedmon has been often commented on, and it may well have been that MILTON took some of his ideas from Caedmon, but we have no positive evidence of this. JUNIUS also compiled the Etymologicon Anglicanum, which was not published until 1743, a Glossary of five Northern languages, and several Anglo-Saxon glossaries, and illustrated with notes several Anglo-Saxon works already published. He contributed, moreover, to the study of Teutonic philology by publishing for the first time ULFILAS's Gothic translation of the Gospels form the Codex Argenteus, together with the Anglo-Saxon Gospels, in parallel columns, the work having been printed at Dordrecht in 1665, edited by FRANCIS JUNIUS and THOMAS MARESCHALL. The Anglo-Saxon types used by JUNIUS, and his valuable MS. collections were bequested by him to the Bodleian library at Oxford, where he had long pursued his studies. His industry and research were such as characterize German scholars, and his character for learning was not surpassed by any of his day; he was the precursor of the father of Teutonic philology, JACOB GRIMM. But Anglo-Saxon studies were much impeded during the first half of the seventeenth century by the lack of Grammar and Dictionary. Notwithstanding the MSS. collections made by various persons the student had no printed Dictionary to facilitate his progress. This was destined soon to be partially remedied by WILHAM SOMNER, author of the first Anglo-Saxon Dictionary ever printed. This work was published at Oxford in 1659, with a Latin and English translation of the words, and at the end the Latin-Saxon Grammar and Glossary of AELFRIC. SOMNER began

the study of Anglo-Saxon for its utility in the study of antiquity, and after he had made himself master of the language, was urged by his friends to compile a dictionary. CASAUBON writes* that he "ceased not to im portune him that he would think of compiling a Saxon dictionary, by which labor he would best cultivate that language, and receive infinite thanks from all those who were desirous of studying it." The means were soon found in his presentation to the Spelman lecture at Cambridge, on the death of WHELOCK in 1657, having been recommended for the appointment by Archbishop USHER, who thought that his Saxon dictionary "weuld more advance the study of that tongue than bare academic lectures." SOMNER had to find out and collect his own materials. He was much assisted by his friends, JUNIUS having sent him AELFRIC's Glossary, transcribed by himself at Brussels; SELDEN communicated to him the glossary of NOWEL; Sir SYMOND D'EWES, the collection of JOSCELYN; and it is probable that he used the list of words made by his predecessor, WHELOCK, from Bede. The result was, the dictionary above-mentioned, with AELFRIC's Grammar, which, though intended to teach Latin to Anglo-Saxon youths, could now serve in some measure, for learning the Anglo-Saxon Grammar. The publication of SOMNER's dictionary gave an impulse to the study of the English language, as is shown by works which appeared soon afterwards, some of which endeavored to trace English words to their Anglo-Saxon prototypes; so, whatever the defects of his dictionary, we may still thank SOMNER for having made a valuable contribution for his day, to the study of English philology. Dr. THOMAS MARESCHALL, afterwards Rector of Lincoln College, Oxford, has already been mentioned as a fellow-laborer with JUNIUS in the publication of the Gothic and Anglo-Saxon Gospels. He also collected materials for an Anglo-Saxon Grammar, but never completed it; and is noted more particularly as the instructor in Anglo-Saxon of Dr. GEORGE HICKES, author of the epoch-making Thesanrus.

Passing over a few other Anglo-Saxon Publications subsequent to JUNIUS and MARESCHALL's Gospels, we come to the year 1689, when Dr. GEORGE HICKES published the first Anglo-Saxon Grammar entitled, "Institutiones Grammaticae Anglo-Saxonicae et Moeso-Gothicae. The MS. Grammar ascribed to JOSCELYN could not be found, and HICKES had to reduce the language to some sort of grammatical system. This attempt to trace out a common system for Anglo-Saxon and Gothic Grammar is characterized by Dr. WHITE as, "if not successful, evincing courage and industry in an undertaking in which the author had no coadjutor, guide, or precedent."† It was, however, of use to students of the Anglo-Saxon language, and especially to EDMUND GIBSON, afterwards Bishop of London, who in 1692, published an improved edition of the Anglo-Saxon Chronicle, with a more literal Latin translation than that of WHELOCK. Queen's College, Oxford, to which GIBSON belonged, was now the chief seat of Anglo-Saxon learning, and in 1698, we find EDWARD THWAITES there teaching Anglo-Saxon to a class of *fifteen* scholars, but complaining much of the lack of Lexicons,

* Petheram, p. 65.

† White's Preface, p. 27.

that he had "but one SOMNER for them all." This led him to encourage the publication of an epitome of SOMNER's Lexicon by BENSON, which appeared in 1701. THWAITES had meantime written a Latin Preface for King ALFRED's translation of Boethius on the Consolation of Philosophy, published by CHRISTOPHER RAWLINSON, in 1698; and had himself published in that year AELFRIC's Heptateuch, with the Book of Job, the apocryphal Gospel of Nichodemus, and the poem of JUDITH. Both of these works were printed at the Sheldon press from the types presented to Oxford University by JUNIUS. THWAITES's valuable services were made use of by HICKES in carrying through the press his great work, "Thesaurus Linguarum Veterum Septentrionalium." published at Oxford in three folio volumes in 1705. This work must be judged from the philological standpoint of that day, not of this; and though called by KEMBLE "that miracle of indirected industry and mistaken learning."* Dr. WHITE, after recounting the difficulties under which it was prosecuted, says, "we may be inclined to wonder less that HICKES has erred than that his errors are so few," and "in maintaining its position for more than a century, as a beacon amidst much prevailing obscurity, it has been instrumental in saving the Northern languages from that wreck to which popular neglect and indifference might otherwise have consigned them."† Besides the literary records themselves in the old Northern languages, the work contains an Anglo-Saxon and Moeso-Gothic Grammar, a Franco-Theotisc Grammar, and an Icelandic Grammar, with a Dissertation on the use of the Northern languages, a Treatise on Anglo-Saxon and Anglo-Danish Coins, and a most valuable Catalogue of Northern Books and MSS. drawn up by H. WANLEY in English, and translated into Latin by THWAITES.‡

But the limits of this Essay remind us we must hasten through this historical outline of the progress of Anglo-Saxon learning in England, although the labors of THWAITES and WANLEY, as well as of Dr HICKES, in promoting that learning, deserve a larger space than we can here accord to them. Before the publication of the "Thesaurus," WILLIAM ELSTOB, a nephew of Dr. HICKES, projected an edition of King ALFRED's Anglo-Saxon version of Orosius, in 1699, and soon afterwards, in 1701, issued proposals for a new edition of the Anglo-Saxon Laws. His MS. of Orosius was not published until 1773, by the Hon. DAINES BARRINGTON, and his proposod edition of the laws was never published, either want of encouragement, or his early death preventing it.§ His learned sister, ELIZABETH ELSTOB, is, perhaps, better known, and deserves mention here as the first woman who took an interest in Anglo-Saxon studies. She published in 1709 "An English-Saxon Homily on the Birth-day of St. Gregory,"‖ with an English translation, a Latin version by her brother, and an appendix containing some epistles of St. GREGORY. She also compiled from the works of HICKES and THWAITES, and published in 1715, "The Rudiments of Gram-

* Petheram; p. 83.

† White's Preface, p. XXXIII.

‡ White's Preface, p. XXXI. Petheram, pp. 80, 81.

§ Petheram, pp. 88, 91.

‖ Petheram, pp. 91, 92, et seqq. White's Preface to Ormulum, pp. XXXIX, XL.

mar for the English-Saxon Tongue, first given in English; with an Apology for the Study of Northern Antiquity." In her preface to the Homily, she tells us how she came to learn the Anglo-Saxon language, having been encouraged in her studies by her uncle Dr. HICKES. She says: "This great patron of Septentrional studies hath ever since persevered to encourage my proceeding in them, and to urge me that, by publishing somewhat in Saxon, I would invite the ladies to be acquainted with the language of their predecessors, and the original of their mother-tongue." We fear very much that the ladies did not accept her kind invitation, but as it is never too late to repeat it, it is to be hoped that some will yet be encouraged to follow her good example and her zeal for Anglo-Saxon learning. One of her contemporaries states that "she was of an ancient family and genteel fortune, but pursuing too much the drug called learning, and in that respect failed of being careful of the one thing necessary." She supported herself by keeping school, and was afterwards tutoress in the family of the Duchess-dowager of Portland, "where," says this writer, "we have visited her in her sleeping-room at Bulstrode, surrounded with books and dirtiness, the usual appendages of folk of learning. But if any one desires to see her as she was when she was the favorite of Dr. HUDSON and the Oxonians, they may view her portraiture in the initial G of the English-Saxon Homily on the Birth-day of St. Gregory.

In 1711 THWAITES had published anonymously at Oxford a compendium of Anglo-Saxon Grammar taken from HICKES's Thesaurus.* Though long since superseded, it is valuable as marking one step in the progress of Anglo-Saxon learning in England, and forming one of the earliest helps to a knowledge of that tongue. Besides Archbishop Gibson already mentioned, WILLIAM NICOLSON, Bishop of Carlisle, was very zealous in promoting Anglo-Saxon studies. He prepared a Grammar, projected an edition of the Chronicle, and in conjunction with Bishop Gibson and others, recommended the establishment of an Anglo-Saxon lecture at each of the Universities. He was also the patron of DAVID WILKINS, who published the Anglo-Saxon Laws in 1721, and gave him a pension while he was preparing the work for the press.

The first half of the eighteenth century was marked by the publication of several other Anglo-Saxon works, chiefly relating to history and antiquities,† materials for another Anglo-Saxon Dictionary were gradually compiled, and there was a growing tendency to translate the Anglo-Saxon text into English instead of Latin. In the year 1750 Dr. RICHARD RAWLINSON "gave the yearly sum of 87£. 16s. 8d.‡ to the University of Oxford, for the maintenance and support of an Anglo-Saxon Lecture or Professorship forever," though the endowment did not take effect for more than forty years later. The year 1755 saw the publication of the first edition of Dr. Johnson's Dictionary, with specimens of Anglo-Saxon and Early English prefixed, to give a historical view of the changes in the language.

*We were so fortunate as to pick up a copy of this work at an antiquarian book-store in New York, and regard it as a curious and interesting relic of the Anglo-Saxon scholarship of that day.

† Petheram, pp, 99 et seqq. White, pp. XL et seqq.

‡ Petheram, p. 105.

We are told that about this time a new edition of Caedmon was contemplated, with an English translation to be made by EDWARD LYE, but it was never published. The name of LYE will, however, be revered by Anglo-Saxon scholars, as the greatest Teutonic lexicographer that had yet appeared. He had published in 1743 the "Etymologicon Anglicanum" of JUNIUS with additions, and with an Anglo-Saxon Grammar of his own prefixed. He soon after began to collect materials for an Anglo-Saxon and Gothic Dictionary, and devoted many years of labor to this work, but on account of his health and the expense to be incurred in the printing, relinquished it for a time. But being encouraged and assisted by Archbishop SECKER, he set to work again, and completed the MS., but lived to print only about thirty sheets of the work. He died in 1767, leaving to his friend, Rev. OWEN MANNING, the completion of the work, by whom it was published in 1772, accompanied with an Anglo-Saxon and Moeso-Gothic Grammar, and it is still held in high esteem, especially for its faithful adherence to the orthography of the examples and citations." So says Dr. WHITE, and his testimony is corroborated by HALBERTSMA in the Preface to BOSWORTH'S Anglo-Saxon Dictionary.* The year 1773 saw the publication, already mentioned, of King ALFRED'S Version of the Historian Paulus Orosius, which had been transcribed by Francis Junius, and afterwards by WILLIAM ELSTOB.

In the year 1795 the first appointment was made, under the Rawlinson endowment, of an Anglo-Saxon Professor in the University of Oxford. There are several peculiar conditions laid down in Dr RAWLINSON'S will. The professor must be a bachelor as long as he holds the appointment, must be a regular not a created graduate, and cannot occupy the chair more than five years: also, natives of Scotland, Ireland, and of the Plantations abroad, and their sons and all present and future members of the Royal and Antiquary Societies are excluded. St JOHN'S College, which was RAWLINSON'S, was to have the first and every fifth term, and the others in order of antiquity, the election being vested in the Convocation.† Notwithstanding these restrictive clauses,—with respect to which says Professor INGRAM, "however much they are to be regretted, we must recollect that they arose from a certain train of political and religious sentiments, which at the time were by no means peculiar to Dr. RAWLINSON"—this professorship has contributed greatly to the advancement of Anglo-Saxon learning, as witness the labors of INGRAM himself, of CONYBEARE, of BOSWORTH,‡ EARLE, and others.

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* Petheram, p. 110. White, p. XLIV.

† Appendix I to Ingram's Inaugural Lecture, pp. 35 et seqq.

‡We cannot mention the name of Bosworth without a passing tribute to the memory of this veteran Anglo-Saxon scholar. The Rev. Joseph Bosworth, D. D., LL. D., late Rawlinsonian Professor of Anglo-Saxon in the University of Oxford, died on the 27th of May last, at the age of eighty-seven years. He was the contemporary of Rask and Grimm, being but two or three years junior to either, and outlived them both many years. In his death, says Mr. Sweet, in the Academy of June 3d, "English Philology has lost its most venerable representative. He could remember the time when the sure foundation of scientific philology was laid by the great Dane, Erasmus Rask, and when Jacob Grimm in Germany, working with the materials and methods he learnt from Rask, was able to rear that astonishing monument of human industry and research, the *Deutsche Grammatik*." "Although," continues Mr. Sweet, "Dr. Bosworth corresponded both with Rask and Grimm, he never mastered the principles of modern scientific philology, but remained till the last true to the older school represented by the works of Hickes

The eighteenth century closed with the publication of the first volume of the first edition of Sharon Turner's History of Anglo-Saxons, and here we must close this retrospective sketch,—which has already been prolonged beyond what we intended,—and with the first quarter of the present century began that revival of Anglo-Saxon studies, which is still bearing its fruits. The labors of the scholars just mentioned, of Kemble, Thorpe, Madden, White, Morton, and in recent years of Morris, Skeat, Sweet, and others, show that this revival has taken strong hold of scholars in England. But on the Continent the revival was also felt, if, indeed, it did not begin there, as the works of Thorkelin, Rask, and Grundbrig in Denmark,—of Jacob Grimm, Leo, Bouterwek, Dietrich, Ettmüller, and, in recent years, of Grein, Heyne, Loth, Zupitza, Wülcker, and others in Germany, abundantly testify. Our own country, too, has not been behindhand. So far as we know, the first impulse to the study of Anglo-Saxon in this country was given by Thomas Jefferson. In his letter to Herbert Croft, Esq., of London, dated at Monticello, October 30th, 1798, and prefixed to his "Essay towards facilitating instruction in the Anglo-Saxon,"* we see the great statesman, at that time Vice-President,—in the midst of the troubles with the French Government and not one month before he penned the celebrated Kentucky resolutions of protest against the Alien and Sedition Laws,—withdrawing his mind from politics, and submitting to his friend his ideas for facilitating the study of the Anglo-Saxon language.

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and Lye." But, we would add, notwithstanding this fact, Dr. Bosworth, if he had written nothing but his Dictionary alone, would have laid under grateful obligations all future generations of Anglo-Saxon scholars, until some one arises who will give us an Anglo-Saxon-English Dictionary that can take the place of it. A first-rate Anglo-Saxon Dictionary is a great desideratum still, and here is a wide, though thankless, field of labor for some one of our younger Anglo-Saxon scholars. We are told that the venerable Professor was engaged during the last years of his life on a new and enlarged edition of his Dictionary, but his death has left this work unfinished. The *Athenæum* for June 3d informs us that "his greatest energies have been for many years bestowed on the collection and arrangement of materials for a complete Dictionary of the Anglo-Saxon tongue,—and some considerable portion of the matter has been brought into order." We know no better task that Mr. Sweet himself could undertake than the completion of this work in the true spirit of "modern scientific philology." A mere enumeration of Dr. Bosworth's works is sufficient to show his services to Anglo-Saxon learning. In 1823 appeared his "Elements of Anglo-Saxon Grammar," the first grammar of the language that was ever written in English, with the exception of Miss Elstob's, as Thorpe's translation of Rask's Grammar was not published until 1830, though the first edition of Rask's original work appeared in 1817. In 1826 was published Dr. Bosworth's "Compendious Grammar of Primitive English or Anglo-Saxon:" in 1838, his "Dictionary of the Anglo-Saxon language," with its most valuable Preface; in 1848, his "Compendious Anglo-Saxon and English Dictionary," a new edition of which appeared in 1860; in 1855, his edition of "King Alfred's Anglo-Saxon Version of the History of Orosius;" and in 1865, his "Gothic and Anglo-Saxon Gospels in Parallel Columns, with the Versions of Wycliffe and Tyndale," a second edition of which appeared in 1874, a most valuable work for the student of historical English. Dr. Bosworth held the chair of Anglo-Saxon in the University of Oxford from 1858 up to the time of his death. His zeal for the promotion of Anglo-Saxon studies was further shown by his gift, in 1867, to the University of Cambridge, of the large sum of £10,000 towards the foundation of a Professorship of Anglo-Saxon in that University. Mr. Sweet thinks that his reputation as an Anglo-Saxon scholar was due to two causes:—"firstly, to his having had the courage to take up the study of the oldest stage of our language at a time when that study was perhaps at the lowest ebb it had ever reached since the days of Archbishop Parker; and secondly, to his successful attempts to popularize it in convenient and cheap hand-books;" and that to him "belongs the no small merit of having been the first to free Anglo-Saxon grammar and lexicography from the trammels of Latin rules and interpretations." Certainly these are no small merits, even if Dr. Bosworth was not particularly distinguished for original research,—which is much cried up in these days to the detriment, sometimes, of the furtherance of a practical knowledge of a specialty—and to him are due the heartfelt thanks of all true lovers of Anglo-Saxon learning.

* Published for the use of the University of Virginia, by John F. Trow, New York, 1851.

He says (page 4): "I was led to set a due value on the study of the Northern languages, and especially of our Anglo-Saxon, while I was a student of the law, by being obliged to recur to that source for explanation of a multitude of law terms." "I accordingly devoted some time to its study, but my busy life has not permitted me to indulge in a pursuit to which I felt great attraction." The opening sentence of his "Essay" is to the following effect: "The importance of the the Anglo-Saxon dialect towards a perfect understanding of the English language seems not to have been duly estimated by those charged with the education of youth: and yet it is unquestionably the basis of our present tongue." That in might be "duly estimated," at least in his native State, when the University of Virginia was opened in 1825, he required that the Anglo-Saxon language should be regularly taught there. In the words of the present learned Professor of Modern Languages in that University: "The illustrious founder of the University of Virginia, Thomas Jefferson, appreciating with rare foresight, fifty years ago, the importance of a scientific study of the English Language, inserted Anglo-Saxon among the subjects on which a course of lectures was to be delivered by the incumbent of the chair of Modern Languages."* If Anglo-Saxon was taught in any collegiate institution in this country previous to 1825, we are ignorant of the fact; but this requirement of Mr. Jefferson, for many years the Rector of the University evinces his sense of the importance of the study of Anglo-Saxon in all our Colleges and Universities. The first Anglo-Saxon Grammar published in this country was that by Dr. Louis F. Klipstein, a German by birth, but at that time a resident of South Carolina. It appeared in 1848, and the following year a new and revised edition dedicated to, and containing an appreciative introduction by, a well-known citizen of Baltimore, Orville Horwitz, Esq. In 1849 were also published the two volumes of Klipstein's "Analecta Anglo-Saxonica," and these were for many years the only helps accessible, published in this country, for the study of the Anglo-Saxon language and literature. In this connection, perhaps, a work deserves mention, though not bearing solely on our subject, and long since forgotten if ever known to many, but still illustrating further the desire of German scholars to promote the study of philologic science in their adopted country. It is a curious "*omnium gatherum*," published in New York in 1852, and entitled "Glossology, being a treatise on the Nature of Language and the Language of Nature," by Charles Kraitsir, M. D., who was formerly Professor of Modern Languages in the University of Virginia. The closing paragraph of Dr. Kraitsir's brief Preface is typical of the style of the work. He says: "The United States have declared themselves *independent* from Royal Great Britain on the 4th of July. That they may become *independent* also from medieval scholasticity is the most ardent wish of him who writes these lines on the homarithmic 76th anniversary of that *Glorious Day*." Had the crusty old German lived to see the centennial anniversary "of that glorious day," he might have congratulated himself on the progress made in philologic science in this land during the past quarter of a century, and especially might have revised the denunciatory opinion expressed in the following para-

**Preface to Schele de Vere's "Studies in English."*

graph: "Pray, how do we stand as to Anglo-Saxonism? Which of the universities (say UNIVERSITIES) in this fair land *converts* its attention to this *unique* language of the patriarchs of England? Thomas Jefferson made it incumbent on the professor of modern languages at the University of Virginia, to teach that marrowy idiom: but he ought to have done like Ali pasha of Egypt and other civilizers, who compelled attendance on the lessons prescribed, if he wished to create respect for the noble ancestry of the present English." We of the present generation may be thankful that we live in better times. We have lived to see published the manuals of Shute, Corson, and Carpenter, and especially the Anglo-Saxon Reader and the exhaustive "Comparative Grammar of the Anglo-Saxon language," by Professor Francis A. March, of Lafayette College, which is an honor to American scholarship, and has been well characterized by both English and German scholars as the most complete treatise on the Anglo-Saxon language ever published.

But notwithstanding these numerous helps, which did not exist even ten years ago, we shall have to lament that so few of our schools, colleges and universities, have awakened to a conviction of the importance of Anglo-Saxon studies. The good work is going on, but, as it seems to us, too slowly. We do not wish to arrogate to our subject such importance as to exclude equally as important and necessary branches of knowledge, but we honestly think that the study of the Anglo-Saxon language as the basis of all thorough and critical knowledge of English, should be made a *required* study in every college in the country, and that every university should afford an opportunity for its pursuit, and should encourage it by all legitimate means in its power. We can no longer plead lack of helps, though there is still lack of a good dictionary, but the glossaries attached to the manuals mentioned will suffice for an elementary knowledge. Professor James Ingram, in assuming the chair of Anglo-Saxon in the University of Oxford, in the year 1807, delivered "An Inaugural Lecture on the Utility of Anglo-Saxon Literature," in which he proposes and discusses in a very eloquent manner, "several material points in favor and recommendation of Anglo-Saxon literature."* I. First, he shows "that the study of Anglo-Saxon literature has never been neglected or vilified by men of learning, but, on the contrary, has been uniformly cultivated and promoted; and that the importance of it has been always maintained to the present time by men of the first rank in the republic of letters, for their accurate taste, sound judgment, and profound erudition." II. Secondly, he examines "what inducements there are to the cultivation of Anglo-Saxon literature," and shows that they are strong and powerful, in that "the knowledge of it is of the greatest importance to Englishmen, and that it is ultimately connected with the original introduction and establishment of their present language and laws, their liberty, and their religion." III. Lastly, he suggests that it is also capable of being made a subject of *general* interest in the pursuit of universal knowledge, and may serve as a medium of illustration to those who are disposed to study and investigate the philosophical principles of grammar and the true theory of language.

* Ingram's Inaugural Lecture, p. 2.

Professor INGRAM'S first point has been sufficiently elucidated in the historical sketch of the progress of Anglo-Saxon learning which we have already given. He illustrates his second point in considering that "the great mass of the people of England continue at this day to be of Saxon origin, and that the present *language* of Englishmen is completely Anglo-Saxon in its whole idiom and construction." He further considers "how far the study of Anglo-Saxon literature is connected with the original establishment of our *laws*, our *liberty*, and our *religion*." As Americans are the heirs of Englishmen in all these respects, the argument is equally applicable to ourselves, and we regret that we have not the space to follow the learned professor in it, but he satisfactorily shows, to use his own words, that a strong and steady light may be reflected from this quarter [*i. e.*, from a knowledge of Anglo-Saxon literature] on many points of the municipal and common law, the theory of our politcal constitution, and the internal history of our religion." Professor INGRAM discusses his third point very briefly. With respect to its being made a subject of general interest in the pursuit of knowledge, he well says: "No person can doubt of the indispensable utility of Saxon literature in elucidating the topography and antiquities of our island, in explaining our proper names and the origin of families, in illustrating our provincial dialects and local customs; all which are the memorials of the ancient manners and character of our ancestors and without a knowledge of which every Englishman must be imperfectly acquainted with the history of his own country; *a fortiori*, every American too, for we must learn not only the history of this country, but that of England also, if we would possess an adequate knowledge of our historical progress. But with respect to his *last* statement, Professor INGRAM excuses himself from a full discussion of it, "as the philosophy of language is a science yet in its infancy, and it may be long before we can expect that great *desideratum* in literature to be produced a *synoptical view of universal Grammar.*" Although this so-called "*desideratum*" is still to be produced, the science of language has made gigantic strides within the last seventy years; in fact, we may say that it has constituted itself a science within that period, and consequently we occupy a very different stand-point from that occupied by scholars of the beginning of the present century. Thanks to the great German masters in comparative grammar, and especially to JACOB GRIMM, we can now *locate* the Anglo-Saxon language, if I may use the term, and establish its relations to the cognate Teutonic dialects, and consequently to the other members of the Indo-European family of languages. For the present, students must restrict their view to the important family of languages, as increase of knowledge has shown that Professor INGRAM'S "desideratum" is at present, a Utopian dream, and may, for aught we now know, forever remain so, but even within these limits, what a wide field is open to the student of language! But if we come nearer home and limit our view to the Teutonic branch alone of this family, we have work to occupy the longest lifetime, and who can solve all the problems that naturally present themselves? And for the study of this branch of languages we have a key ready made to our hands in the Anglo-Saxon language. The same linguistic framework is seen in all these dialects, its fullest and most prim-

itive form in the eldest sister, the Gothic of Ulfilas, but variously modified in the Old Norse, the old High German, the Old Frisian, the Old Saxon, and finally, the Anglo-Saxon. It would seem as if the original Teutonic present speech had been cast in a single mould, but, not being allowed to harden, remained ever susceptible to the varying influences of race, climate, soil, contact, which have differently modified it in the history of its long career. For English-speaking people the Anglo-Saxon may be taken as the norm of Teutonic inflection, and by means of it comparison be made with its cognate dialects. The wealth of vowel change and the laws which govern it, as exhibited in the Anglo-Saxon language, enable us readily to comprehend Teutonic vocalization. In respect to consonantal permutation we here occupy the mean between the classical forms and those assumed by the more recently developed parent of modern German. The same vowel and consonant declensions of nouns, the same radical forms and inflections of pronouns, the same definite and indefinite declensions of adjectives, the same remnants of an older reduplication and active working of that vocalic change in verbal forms denominated by GRIMM *Ablaut*, which is peculiar to the Teutonic languages,—are seen here in full force, so that he who knows Anglo-Saxon will learn the older and the later forms of any other Teutonic idiom with comparative ease. But not only for its aid in the comparative study of languages is a knowledge of Anglo-Saxon valuable to us. Forms of everyday use in the modern language, the origin of which has been lost sight of in the course of time, are only explicable when traced back to their Anglo-Saxon source. Constructions which defy the Procrustean tortures of classical phraseology, are only intelligible when it is seen how they have originated in the older speech; for from it alone we derive many an expression, of which the only explanation vouchsafed by our grammarmongers is that "it is an English idiom." It is not worth while to dwell upon the kinds of words of pure English origin remaining to us, and the force of expression derived from the cultivation of a Teutonic style; for these matters are at last beginning to form a part of elementary instruction in English composition and rhetoric. It is more to our purpose to urge still further the study of the Anglo-Saxon language on the ground that it makes our older writers so much more intelligible and enjoyable. We shall not undertake to say that the student of the modern tongue alone is shut out from the enjoyment of CHAUCER, but we do say that, if he possesses a knowledge of Anglo-Saxon, he will understand CHAUCER much better, and will even see more clearly the meaning of some words and phrases of SHAKSPERE, which he may now find hard to comprehend. And if he carries his reading beyond CHAUCER, he will be at a complete stand-still without a knowledge of Anglo-Saxon. In fact, the period of transition from the breaking up of the Anglo-Saxon inflections, followed by the introduction of Norman-French words and phrases, to the beginning of system and permanency of form in the language of the fourteenth century, the language of Chaucer, Gower, Wycliffe, Langland, and other contemporaries,—is the most difficult period of English. We need all the light that can be thrown on it from every source, and without a knowledge of the older language, it does not seem to me comprehensible, Even

with that, much will remain unexplained without the light thrown on it from a knowledge of Old French, but that knowledge alone will not suffice.—Let Anglo-Saxon be studied, then, in all our Colleges and Universities for many reasons: for the information which its own literature supplies to the history and antiquities of the race, the laws and customs, the religious and social condition of the people; for the advantages which it gives us in the comparative study of languages; for the light which it throws upon the structure of the modern language; and for the aid which it affords in understanding the earlier English literature.

I regret much that the lack of time in the preparation, and the disproportionate length of the earlier part of this paper, have prevented me from enlarging upon the points which have been briefly and hurriedly presented at the close. But I trust that some students of English may be induced to investigate the subject for themselves, to appreciate the advantages to be derived from a study of the Anglo-Saxon language and literature, and to urge its introduction into the curricula of all our Colleges and Universities.

President D. C. GILMAN, LL. D., Johns-Hopkins University, was elected President of the Department for the ensuing year; E. T. TAPPAN, LL. D., of Ohio, Vice-President, and Prof. E. S. JOYNES, LL. D., Vanderbilt University, Secretary. The Department adjourned at 1 P. M., in order to participate in the excursion down the Chesapeake Bay, to Fair Haven.

NORMAL DEPARTMENT.

First Day's Proceedings.

MONDAY, JULY 10, 1876.

The Normal Department was called to order by EDWARD BROOKS, Principal of State Normal School, Millersville, Pa. The Secretary being absent, C. C. ROUNDS was appointed Secretary.

The following opening address was then read by Pres. BROOKS:

CENTENNIAL THOUGHTS ON NORMAL SCHOOLS.

Assembled at a time when the events of a vanished century are passing in array before us, the very air we breathe seems filled with the spirit of retrospection. The eye of the nation is turned backward, the onward reach of its mind is checked by the spirit of contemplation, while the national heart is throbbing with gratitude for the patriotic deeds which resulted in the establishment of a nation grander than was ever enshrined in the dream of poet or philosopher. Standing in the proud position of a hundred years since the fathers spoke the words and dared the deeds which made us a nation, and realizing the influence of educated mind and heart in the establishment and development of the republic, it is natural for us, catching the general spirit of retrospection, to turn our eyes toward the educational part of the century. As President of the Normal-School Department of this Association, I seem to be called upon to refer to a single point of this past, that which pertains to Normal Schools.

It will not, I believe, be claiming too much to affirm that one of the most striking and important educational achievements of the past century is the establishment of a system of Normal Schools. One hundred years ago, when the fathers uttered with trembling lips the words that made us a nation, there was not a single Normal School in this country,—indeed, so far as we know, it had not entered the American mind even as a thought or a dream. The idea was just beginning to be developed in the consciousness of the Old World, though it was far from a generally-established institution there, and many years of incompetent teachers and poorly-taught schools were to pass before the system was transplanted and took root in the New World.

The idea seems to have had its origin as early as the year 1681, although it did not develop into national significance and recognition until 1735,

and was not generally recognized as a necessity of a system of public education until many years subsequent even to that date. Permit me to occupy a few moments of your time in speaking of their origin and growth, the work they have accomplished, and their prospects in the future.

I. The earliest school for the training of teachers is believed to have been established in the year 1681 by the good Abbé de la Salle, a philanthropist and religous devotee, who devoting himself to the education of the young in his native city of Rheims, in which he was canon of the Cathedral, and finding the teachers incompetent for their duties, conceived the idea of bringing those of a particular class from the neighboring parishes into a community for their professional training, for which purpose he first had them meet and lodge at his own house, and afterward in a house that he purchased for the purpose, where out of school hours and during holidays they would spend their time in the practice of religious duties and in mutual conferences on the work in which they were engaged. Subsequently, upon the establishment of a large number of free schools, to meet the applications which were constantly made to him for teachers, he resigned his benefice, distributed his property among the poor in order to place himself on a social equality with the schoolmasters of the poor, founded a society called the "Brothers of the Christian Doctrine," and inaugurated a system of schools that gave to the world some of the most devoted teachers it has known.

A few years subsequent to this, in 1697, the first teachers' class in Prussia was founded at Halle, by AUGUSTUS HERMANN FRANKE, who "providing a table or free board for such poor students as stood in need of assistance, selected a few years later, out of the whole number, twelve who exhibited the right basis of piety, knowledge, skill, and desire for teaching, and constituted them his "Seminarium Preceptorium," or Teachers' Seminary. These pupil teachers received separate instruction for two years, obtaining a practical knowledge of methods in the classes of the several schools, and, for the assistance thus rendered, bound themselves to teach for three years in the institution after the close of their course." So successful was the work of this institution, that hundreds of teachers were attracted to Halle from all parts of Europe to observe and study the organization, methods, and spirit of the various schools. This was, beyond question, the germ of the Normal-School system of Prussia, and through the influence of Prussian systems of education, of the world. Though preceded in the work by the good Abbé de la Salle, the actual father of the system of teachers' seminaries, it seems to be admitted, was AUGUSTUS HERMANN FRANKE.

About the same period, a class for teachers was opened in the Abbey of Klosterberge, near Madgeburg; and as early as 1730 courses of lectures on the best methods of teaching German and the ancient languages were common in the principal universities and higher schools of Germany; and in 1738 a regularly-organized seminary for this purpose was established at öttingen, the success of which led to the establishment of similar institutions in the principal educational centres of the country.

The first institution which is said to be justly entitled to the name of a Normal School was that established at Stettin, Prussia, in 1735; the object

of which was the preparation of teachers for the primary schools of the town. Under the auspices of FREDERICK the Great, HECKER, a pupil of FRANKE, noted also as the author of the German burger or high school, established an institution for the education of teachers of elementary schools, at Berlin, in 1748. In 1757 a seminary for teachers was opened at Munster, in Hanover; in 1767, a private teachers' seminary was opened by VON ROCHOW at Rekauke in Brandenburg; in 1770 a Normal School was organized in Vienna; and between 1770 and 1800, teachers' seminaries were introduced into nearly every German State, some of which were private institutions, but the majority were supported wholly or in part by the government.

From Germany the system gradually extended to other countries of Europe. France, to which belongs the honor of having had the first teachers' seminary on record established within her borders, took no further steps in the matter until 1794, when by an ordinance of the National Convention, a Normal School was established to furnish professors for colleges, and which, though adorned by the instruction of such brilliant scholars and teachers as LAGRANGE, LAPLACE, etc., on account of its aim being beyond the wants to be supplied, and also the lack of qualification on the part of its students, had but a temporary existence, being abolished the following year. Upon the re-organization of the University in 1806, the necessity of reviving the Normal School was recognized, and it was re-organized in 1808; and two years subsequently the first seminary designed for the training of teachers of primary schools in France was established at Strasburg, which opened in 1811 as a "Normal class of primary school teachers."

The earliest attempt at the establishment of a Normal School in England, it seems, was that of the "model school and teachers' class of the British and Foreign School Society in the Borough Road, London;" which as early as 1805 made the "training of schoolmasters," in the methods of the school, the ground of a subscription in its behalf; and which, in 1808, was set forth as one of the cardinal objects of the Society. England so conspicuous in her colleges and universities, seems to have moved slowly in the establishment of Normal Schools, even though advocated by her great orator and statesman, Lord BROUGHAM, and others; for it was not until 1839, even after Massachusetts and New York had moved in the matter, that the Committee of Council on Education, so eminently distinguished for its wise and energetic administration, organized two such institutions, which were opened in 1842, Lord JOHN RUSSELL honoring the event by presiding upon the occasion. Since then these schools have largely multiplied in England, Scotland, and Ireland; and it is but recently that Scotland has done honor to herself and set an example to the world by establishing a chair of didactics in the University of Edinburgh, which, as the eminent occupant, Mr. S. S. LAURIE, said in his inaugural address of the 31st of last March, is the first department of this kind in the world.

In our own country the origin of Normal Schools is of quite recent date; indeed, the oldest is not old enough in this centennial year to celebrate even its semi-centennial. The seed for these institutions was planted considerably earlier, but it required time for it to take root and develop

into the magnificent system of which our nation to-day may be proud. The first distinct statement of a proposition for the establishment of teachers' seminaries in this country was made in the year 1816; and to old Yale, the source of so many influences that have tendered to foster the intellectual and moral life of this country, belongs the honor of educating the man who spoke the word so richly freighted with the intellectual life of our people. In that year, a young man in his master's oration discussed "The Ignorance and Incapacity of Schoolmasters;" and gave the outlines of a plan for "an academy of schoolmasters." This young graduate became afterward the distinguished Professor OLMSTED; and to him is accredited the honor, undisputed so far as I have learned, of first publicly advocating the establishment of training schools for teachers on this continent,—a deed that makes one feel that he would like to go with the Normal Association, on this centennial year,—sixty years since he spoke the potent word—visit the spot where he lies and lay the chaplet of our gratitude and honor upon his grave.

The idea then announced developed slowly. Revolutions never flash into existence; they are a growth. The new word must tremble on a thousand lips before it can find a lodgment in the consciousness of the people and be embodied in their institutions. Seven years subsequent to the event named, Gov. DE WITT CLINTON, that wise and far-sighted statesman, in his message to the Legislature of New York, recommended a seminary for teachers, and repeated the recommendation the following year. In 1836, THOS. H. BURROWS, in his report as Superintendent of Common Schools of the Commonwealth of Pennsylvania, recommended the establishment of two schools for the training of teachers, giving detailed explanation of the manner of their organization. This recommendation was repeated and emphasized in his report of 1837, and in his report of 1838 he presented his matured views of a Normal-School system, which, for breadth of conception, completeness of arrangement, and magnificence of proportions, exceeds anything which had hitherto been announced.

In the year 1835, Rev. CHAS. BROOKS, in a thanksgiving address on the 3d of December, gave a sketch of the Prussian system of education, and proposed the holding of a series of conventions of the friends of common schools to agitate the subject of establishing a Normal School in the Old Colony, which resulted in the holding of conventions in different parts of the State, at which, with his own heart all on fire with the subject, he kindled the flame of interest in many other bosoms. He lectured before the Legislature of Massachusetts during the memorable session of 1837, in which the Board of Education was established, and again in 1838, during the no less memorable session in which the appropriation was made for the establishment of the first Normal School in the country.

During the winter of 1837, under the influence of EDWARD EVERETT, then Governor of Massachusetts, the Legislature amended the school law of the State, and established a Board of Education. In 1838, HORACE MANN was elected Secretary of the Board, and laying aside all other duties and professional engagements, with a consecration the most complete in the history of education in this country, he gave his brilliant talents and his untiring energies to the work, and immediately joined in the ef-

fort for the establishment of a Normal School. The Legislature was indifferent and hesitated, the people were apathetic and doubtful, old institutions were indifferent or opposed to the project,—and then, in this hour of doubt and danger, a wise and noble-hearted philanthropist, EDMUND DWIGHT, of Boston, stepped forward and offered the sum of $10,000 for the purpose of establishing a Normal School, provided the State should appropriate an equal amount for the same purpose. That generous offer, containing the seed of a Normal-School system for the country, was accepted. The great State of Massachusetts could not afford to be out-done in liberality towards the cause of education by a single individual; the amount was appropriated, a situation selected, and on the 3d of July, 1839, thirty-seven years ago last week, a day ever memorable in the history of American education, the first Normal School in the country, under the efficient supervision of that rare teacher, CYRUS PIERCE, with *three* pupils, an immortal trio, was ushered into existence. Had I known who these three pupils were, if still living, I should have invited them to be with us on this occasion.

I need not say that the projectors of the school were fortunate in their choice of Professor PIERCE, who, it would almost seem, was ordained for the position. It was an hour of responsibility such as we can hardly realize to-day, for on his success would depend, in a large measure, not only the continuance of his own school, but the establishment of a system of Normal Schools in the nation. Accepting the position with a full realization of the difficulty and delicacy of the task, and with that spirit of consecration which uttered itself in the immortal words, "I had rather die than fail in the undertaking," his success was eminent even beyond expectation; and he deserves our kindly remembrance to-day as the first Normal-School principal in America; and we would twine a chaplet out of the blossoming feelings of our gratitude, and, in fancy at least, lay it as a tribute of our respect and honor upon his humble grave.

The next great event in the history of Normal-School education in this country, and the last to which I shall refer, is the establishment, in 1844, of the Normal School at Albany, New York, under the principalship of that gifted teacher, DAVID P. PAGE, who, though he labored but four years, filled those four years with such a consecrated purpose and professional skill, that he left an impress upon the Normal Schools of this country that will live for centuries. This school, more than any other in the country, became a centre of normal influence which has pervaded every part of the United States; and I believe that if the true history of the establishment of Normal Schools in this country could be written, it would be seen that the influence of the school at Albany, during its first four years, has had more to do, directly and indirectly, with the organization and methods of instruction of other similar institutions than all other schools combined; and this, I believe, to be due to the rare genius and inspirational power of DAVID P. PAGE, the ablest Normal-School principal that this country has produced,—a man whose consecrated spirit, high moral endowments, magnetic presence and manners, rare genius for organization and management, intuitive knowledge of human motive and character, and strength of personal influence, make him stand out peerless

and alone among the many excellent and eminent men who have adorned similar positions in our country.

Glancing thus at the past of our Normal-School system—and it is a mere glance, for it is not our purpose to give a history of these schools, and we have thus omitted many eminent names associated with their establishment—it will be seen that the system has not been a hot-house product nor the mushroom growth of a summer night. It has grown in an atmosphere of apathy, doubt, and opposition. It owes not its existence to the fostering care of other institutions, but has had to fight its way into public recognition and popular favor. The colleges, the academies, the seminaries, public apathy, distrust, and opposition were all arrayed against the system; but it has made a valiant fight, won a glorious victory, and to-day it stands on the vantage-ground of national recognition and public confidence.

II. Turning from the history of the establishment and organization of the system of Normal Schools, let us glance for a moment at the work they have accomplished.

They have established their claims to a professional recognition among the other educational institutions of the age. In nearly every State of the Union, their standing is regarded as honorable, their work is appreciated, and liberal appropriations are made for their support. In the minds of intelligent educators and statesmen they are an essential part of a system of popular education—indeed, the very head and heart of the system—that from which it draws its life and inspiration, and without which it must fail to accomplish the object for which it is established. Other institutions have recognized their claims, approved their work, and accorded them an honorable position among the educational instrumentalities of the age. Had this Association been held one hundred years ago, or even fifty years ago, no Normal-School department would have had a place in its programme, no Normal-School man would have had a seat in its meeting, the very word, if by chance uttered, would have been to many a term of an unknown tongue; but to-day the system is assigned a conspicuous position, the representatives of the Normal Schools are regarded as the peers of those who give success and dignity to the meetings, and a Normal-School man occupies the distinguished position of President of the Association. Such an achievement, in less than half a century, is a cause of congratulation, if not of pride.

They have achieved a popular recognition as well as a professional one. They have won their way to the hearts of the people, enshrined themselves in their affections,—and the men or Legislatures that, in most of our States, would dare to strike a blow against Normal Schools, would be regarded as striking a blow against the people themselves, and must beware of popular indignation. In our own State the time was when an application to the Legislature for an appropriation for Normal Schools was met not only with indifference but with opposition and ridicule; for several years past the Legislature has made liberal appropriations to these schools. Several years ago you could hardly get the ear of a legislator on anything pertaining to Normal Schools; just before the last election in our *district* one of our State Senators, a candidate for reëlection, drove over

thirty miles to see me and obtain some facts to prepare himself to make a speech in favor of the system, and our own school in particular. He was reëlected. And this, I believe, represents the popular feeling throughout the entire country, except, of course, in the Kansas Legislature, whose members last winter, in refusing to make the usual appropriation for the support of the system, demonstrated their fitness for a lunatic asylum, and will very probably be rewarded for their narrow-minded and pernicious economy by being allowed to remain at home when their terms expire.

The Normal Schools have, to a very great extent, won the confidence and sympathy of the successful teachers in the profession who were not educated at these schools. The most bitter opposition against Normal Schools in several of the States came from the old teachers who, by experience, had attained to excellence in their profession, and who seemed to feel a jealousy toward the young teachers coming out of their schools who, without this long experience, would compete with them or possibly eclipse them. This feeling was so strong that in many parts of the country, combinations were formed to keep Normal graduates out of the county, and in our own State even County Superintendents have seemed to be actuated by the same feeling, as if they were afraid of rivals for their own positions. Such a sentiment may not be entirely extinct to-day, but it is growing less every year. Practical teachers, who have not been educated at Normal Schools, are beginning to present themselves at the annual examinations of these schools in order to secure the diploma awarded to this class of teachers. Last year, at my own school, the two deputy State Superintendents, both scholarly men of large experience as teachers and managers of schools, applied for and received the Normal-School diploma; and this year two graduates of colleges, eminent in their profession, presented themselves for examination in the classical course and received the diploma of that course.

Fourth, they have done much to elevate the standard of professional qualifications. The contrast between the teachers of to-day and forty years ago, in point of scholarship and skill in teaching, is exceedingly marked. The ability of the old schoolmaster in the use of the ferule and the rod was regarded as more essential than literary or scientific culture, or the ability to instruct. One of my early teachers seemed to be a believer in practical phrenology, that the mind was developed by increasing the size of the cranial protuberances, for many a pupil used to go home from school with a bump on his head developed under the magic touch of the teacher's ruler. To keep boys from shooting paper balls at the ceiling was regarded as a higher qualification than to teach the young idea how to shoot. The examination of a candidate, if he had any, was conducted by trustees, many of them could do no more than read or work a "sum" in Long Division, and consisted in having him exhibit his skill in shaping a goose quill into a pen (now one of the lost arts for which GILLOTT is responsible) and working a problem in Practice or "the Rule of Three." In some of the backwoods districts a more important qualification was courage and muscle enough to keep the big boys from a successful rebellion which terminated in locking out the teacher and closing up the school. The lame,

the blind, the indolent, the decrepit, the intemperate, the favored daughter of some wealthy citizen who had attended a boarding-school just long enough to contract some of its silly airs,—such persons were placed in our public schools as the instructors of American youth. The contrast of such a body of teachers,—and the picture is not a whit over-drawn,—with the intelligent and regularly constituted instructors found in our public schools to-day, is to a large extent due to the Normal Schools. Not that they have educated all of these teachers; but, more than any other agency, they have put a leaven of influence into the vocation that is leavening the whole lump. Indeed, many cases where the change would seem to have been brought about by other agencies more tangible to the eyes, a careful examination will reveal the fact that such agencies were the outgrowth of influences which, working silently and unobstrusively, have the source in Normal Schools.

Fifth, Normal Schools have done much toward providing an educational literature in this country. Without a very careful comparison, I venture the remark that they have done more than all the other institutions united. Among those who have made valuable contributions, I may be permitted to name PAGE, SHELDON, OGDEN, WICKERSHAM, JEWELL, HART, HOLBROOK, PHELPS, and there are many others whose names do not occur to me as I write; and to-day many of the younger men are preparing for publication the methods of training which they have found most valuable in the professional course of instruction in our Normal Schools.

Sixth, Normal Schools have contributed largely towards elevating the vocation of teaching into a profession. Years ago the tie of professional feeling among teachers was unknown; and a teacher who, moved with enthusiasm in the contemplation of an art of instruction based upon broad scientific principles, forecasting the future by publicly speaking of the profession of teaching, made himself an object of ridicule,—it was the inflated notion of a schoolmaster wanting to assume for his petty vocation the dignity of the learned professions; and possibly the "tonsorial profession" was referred to as an appropriate comparison. A young man who, dreaming of a better work and a nobler calling, invited the teachers of his neighborhood or county together for mutual improvement not only met with the apathy of his own co-laborers and the opposition of the friends of education, but the contumely and ridicule of the town folks where they assembled. But things have wondrously changed in a few years; and the contrast between the past and present is as great as that between the two pictures which Hamlet presented to his mother, differing, however, in the fact that his Hyperion had passed away while ours is with us for congratulation and rejoicing. The despised claims are now being recognized; lawyers, doctors, and clergymen are beginning to speak of the *four* learned professions;—emphasizing the fact that teaching is to be regarded as the fourth, and one not inferior in dignity to any of the others. Teachers' conventions—known in several of the States as Teachers' Institutes—are regarded with so much popular favor that in many places they are the epochs of the year, transcending in popular interest the circus, the horse-race, the camp-meeting, and the political convention; they call out the dignitaries of the town in which they are held and

are the places where young orators and candidates for popular offices like to air their rhetoric by speaking in high-sounding phrases of the importance of the education of the rising generation, and the sacred duties of the high and holy mission of teaching. The schoolmaster is abroad as he never was before,—not only with his primer and spelling-book, but with a ballot in his hand, with influence in his position, with dignity in his work, with all that which is telling in public opinion and popular appreciation. In awakening this interest in the teacher's vocation, in arousing this spirit which calls together the teachers of a county in popular conventions, in giving dignity to the teacher's work by which it is being regarded as entitled to the claims of professional recognition, in weaving these ties of influence which tend to bind our hearts together in a common cause,—the Normal School stands out as one of the most conspicuous and powerful agencies.

III. Standing upon the altitude of present attainment and rejoicing as we review the conquests of the past, we naturally inquire, what of the future? what are we to accomplish during the next centennial period? It is not my purpose to forecast the future to-day, but it seems proper for me to call attention to a few defects and necessities of the system in order that the future may be as bright with improvements as has been the past.

1. There should be a national standard of qualification for the Normal Schools of this country. At first each school was obliged to fix its own standard of qualifications; at present, in several of the States, the course of study is fixed by the State authorities; what we need, and what I think we are approaching, is a standard that shall be very nearly the same for all the Normal Schools in the country. We want a national standard, so that a teacher trained in one State shall be regarded as competent to teach in every State, and that a diploma given by the Normal School of one State shall be valid over the whole United States. At present, the Normal Schools are in the condition of the State banks before the civil war; in travelling from one State to another we had to submit to the inconvenience of getting onr money changed, sometimes with annoying discounts; now the currency of any State is at par from Maine to Mississippi; and we ask for a currency of qualifications represented by a Normal-School diploma that will be at par in every section of our country, and entitle the holder to professional standing, from the Lakes to the Gulf, and from ocean to ocean. Such an arrangement would tend to unify our system, bind together the various sections of the country with strong professional ties, and give a dignity to the diploma of a Normal School that it cannot otherwise possess.

2. There should be a professional degree given by the Normal Schools to indicate the profession of teaching. So apparent is this proposition, unless the entire system of degrees is wrong, that it seems superfluous to argue it. If the professions of law, divinity, etc., are distinguished and honored by appropriate degrees, why should not the coördinate profession —coördinate in dignity, usefulness, and the talent necessary for success— be also thus distinguished and honored? This was the view of some of the Pennsylvania educators, and through the influence of Dr. Burrowes

and Bishop Potter, several degrees were adopted in the establishment of our Normal Schools. A graduate in the Elementary Course receives the degree of Bachelor of the Elements, B. E., to be followed after two years of successful teaching by the degree of M. E., or Master of the Elements. In the Scientific course the degrees agreed upon were those already adopted by the colleges, B. S. and M. S.; in the Classical Course the degrees are B. C., Bachelor of Classics, and M. C., Master of Classics. These degrees were never entirely satisfactory to some of the leading Normal-School men of the State, but were accepted as the best that could be obtained at the time the Normal-School law was written, and are regarded as merely local, temporary, and initiative. The degree of M. C., for illustration, was objected to by one of the graduates of the Classical Course for fear he would be taken for a member of Congress. What we need, however, is a suitable degree that will be distinctive in its character. and will be recognized and awarded by all the Normal Schools in the country. It may be the simple word *Teacher*, raised by authority to a specific and complimentary meaning:—"Louis Agassiz, Teacher," is regarded as the proudest title of the great scientist and instructor;—but whatever the term, it should be distinctive, appropriate, and honorable. We ask it, not to honor the individual members of our profession, for it is the man who should honor his title—as an institution which confers a degree justly, honors itself quite as much as it honors the man who receives it,—but we ask it because it will give distinctness, dignity, and influence to our vocation, and place place it alongside of the other professions, where for usefulness and worthiness it justly belongs.

3. There seems to be a necessity for a more definite basis of establishing and controlling these institutions. At present the methods are diverse and variable. In several of the States they are established and exclusively controlled by the State authorities. In many cases they are merely private institutions depending on their patronage for support. In some of the States private and public interest combine in their establishment and control. This is the principle upon which the first Normal School in this country was founded,—the outgrowth of necessity rather than of predetermined policy—and, partly through necessity and partly by intention, it has been adopted by several States. This was a necessity in my own State, as the State Legislature would not move in the matter until private institutions had demonstrated the utility of Normal Schools, and then it came in to assist, regulate, and give the sanction of its authority to our work; while in New York, if I mistake not, it has been adopted as a fixed policy. This is thought in principle to be the true basis of organization of a Normal School. The State should determine the number of such schools, decide upon their location, contribute a certain amount to the erection of buildings, fix their course of study, examine candidates for graduation, grant diplomas, make appropriations for its students, and be represented in the Board of Trustees. Aided and encouraged by the State, the people of the community where it is located should erect the school, put their own money into the buildings, have a controlling influence in the Board of Trustees, which board shall elect the faculty and manage the institution subject to the provisions of the Normal-School Act. There

will thus be formed a strong combination of local interest and pride with State authority and direction that will prevent the schools from becoming the playthings of political passion and prejudice, on the one hand, or the contracted instrument of selfish interests upon the other.

There are many other changes and improvements that should be made before these institutions are prepared to meet the demands of the coming century. There should be a more general agreement as to the relation of the scholastic and professional courses; there should be more uniformity in the methods of professional training; there should be a clearer conception of the importance, character, and use of the Model School or School of Practice, in connection with the Normal School; and with these and a few other questions decided and improvements accomplished, we may feel assured, from the unexampled achievements of the century just closing, to look forward for even greater progress and more beneficent attainments of the Normal Schools of our country, during the century upon which we are just entering,

Dr. J. H. Hoose, Principal of a State Normal School at Cortland, N. Y., read the following paper:

I. WHAT IS A SCHOOL?
II. WHAT ARE ITS RIGHTS AND DUTIES?
III. SOME CONSEQUENCES THEREFROM.

LIMITATION:

The scope of the discussion contained in this Paper includes only the Province of the United States, and the Present Time.

It also, as the sequel will show, considers mostly only those schools which are connected, in some way, with the Legislatures of the States, or with the general government.

The discussion aims at the most general views relating to the School.

I. WHAT IS A SCHOOL?

PRELIMINARY QUESTION:

Do Schools exist, have a being, because of a Toleration, or because of a Right?

Have they an establishment within the area of a "matter of favor" only,—a case of permission simply?

Or do they rest upon another foundation, one wholly different in principle?

Gladiatorial instruction and practice do not exist—Schools do. Why the one, and not the other?

PRELIMINARY DEFINITIONS:

1. Toleration is a permission to exist—an allowing to remain—where it is only a matter of favor, or a matter of concession simply.

(Bouvier—Law Dict.—"Toleration.")

As: I allow Mr. Abner to ride with me in my carriage—he is a gentleman, it is true; but that he is in the carriage with me, is a matter of favor, or concession, only.

It does not change the principle involved if it be held that Mr. Abner is in my carriage as a matter of favor or concession towards me from him —it is all one in fact—it is only a matter of favor, or permission, or concession, and is clear Toleration.

2. Right is "a well-founded claim."

(*a*) "If people believe that humanity itself establishes or proves certain claims, either upon fellow-beings, or upon society or government, they call these claims human rights; if they believe that these claims inhere in the very nature of man himself, they call them inalienable rights; if people believe that there inheres in monarchs a claim to rule over their subjects by divine appointment, they call the claim divine right; if the claim is founded or given by law it is a legal right.

The ideas of claim and that the claim must be well founded always constitute the idea of right.

The idea of a *well-founded* claim becomes in law a claim founded in or established by the law: so that we may say a right in law is an *acknowledged* claim." That is, acknowledged legally by the people.

(*b*) "Every well-grounded claim on others is called a right."

(*c*) "Rights are claims of moral beings upon one another."

(*d*) "When the things which we have a right to possess, or the actions we have a right to do, are or may be fixed and determined, the right is a perfect one; but when the thing or the actions are vague and indeterminate the right is an imperfect one."

(*e*) "Political rights consist in the power to participate, directly or indirectly, in the establishment or management of government. These political rights are fixed by the constitution"—and by laws.

(*f*) "Civil rights—which are natural rights acquired anew from the civil law—are those which have no relation to the establishment, support, or management of the government."

(*g*) "Every one, unless deprived by sentence of civil death, is in the enjoyment of his civil rights."

(*h*) "Civil Rights—

(*a*) Absolute—

1. Personal Security.
2. Personal Liberty.
3. Right of Property.

(*b*) Relative.

1. Public—subsisting between people and gov't.
2. Private—reciprocal—between husband and wife, parent and child, etc.

Bouvier—Law Dict. "Right."

To illustrate the nature of Right, as contrasted with that of Toleration:

Mr. Abner, being a proper man, desires to travel by public conveyance —he has a right to enter the coach, having paid his fare—he has a right to *a ticket when* he offers the equivalent.

It is not a matter of favor, nor of concession, as before noted about the carriage—it is a different relation, and hence a different principle obtains in the case.

This is a case of Right—that, one of Toleration.

REPETITION of Preliminary Question:

Do schools exist, have a being, because of Toleration, or is it because of Right?

DISCUSSION—ANSWER:

On the 28th of June, 1776, THOMAS JEFFERSON, of the State of Virginia, chairman of the Committee on the Declaration of Independence, drafted the Declaration.

The committee consisted of THOMAS JEFFERSON, of Virginia; JOHN ADAMS, of Massachusetts; BENJAMIN FRANKLIN, of Pennsylvania; ROGER SHERMAN, of Connecticut; and ROBERT R. LIVINGSTON, of New York.

The Congress that appointed this committee was in session in the State House—now Independence Hall—in the city of Philadelphia.

On the 4th of July, 1776, the Declaration was adopted, and was signed by the fifty-six noble men who adopted it.

In this Instrument are these words:

"We hold these truths to be self-evident, that men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness.

That to secure these rights governments are instituted among men, deriving their just powers from the consent of the governed."

These words enunciate the natural rights of man.

In due time the wisdom of the people of the United States, as in Congress assembled by representation, adopted the following explanatory introduction to the constitution.

This preamble and Constitution, by the adoption became the expressed will of the people.

These are the words:

"We, the People of the United States, in order to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and posterity, do ordain and establish this Constitution for the United States of America."

In this appear the ends, objects, purposes of the judgment of the Citizens.

The essential spirit of the Constitution of the United States is substantially:

That it is a compact between the people of the United States on the one hand, and Congress on the other hand—that it is a contract, "which creates obligations and rights," between the people as represented in their several state Legislatures, in the first part, and their representatives as a Congress, in the second part—that this agreement stipulates that the people, in their capacity as States, grant certain powers to Congress—that these powers are carefully enumerated—that Congress, as individuals, have no rights except those called political—that Congress has no powers

except those contained in the grants—that the States retain unto themselves all other powers that are not inimical to the spirit and integrity of the Constitutional grants.

Again:

The People, in the enjoyment of their natural rights, decide to establish themselves as a State, by representation—they enter into a direct contract with their Legislature—they confirm a compact, as between the Legislature and themselves—this agreement specifies clearly the items of power which the people grant, prohibit, or command the Legislature to heed—they allow the Legislators their natural rights to all the extent that they are not defined by the Contract—the Legislature is a body having only political rights which are defined by the Contract called a Constitution—yet the members have large liberty of civil rights under the State Constitution, which is not enjoyed by members of the United States Congress.

As Witness:

"We, the people of the State of New York, grateful to Almighty God for our freedom, in order to secure its blessings, do establish this Constitution."

(Const. of 1846.)

In all of this matter of compact, as embodied in Constitutions, whether National or State, the people have been jealous of their inalienable rights—they have been so jealous of their prosperity, and so earnest thereunto, that they have emphasized certain stipulations by commanding their Legislatures to attend well to them—these include items and natural rights which are enunciated in the Declaration of Independence, which are reserved from Congress, and which are made imperative upon the several Legislatures of the several States.

Among these items are: To assess and collect taxes to carry forward the work of the State organization—to provide for sure title to property—to render the safety of life and of property certain—to encourage all measures that propose to develop and increase the wealth, either material, directly,—or, by implication, the power to make it, which is the mental—within the limits of the State.

Whatever the people—within their natural or civil rights, deem best for their prosperity and happiness, that they command their political servants, the Legislators, to enact and carry to completion.

Whatever the people—within the limits of their contract made through and by their Legislatures with Congress, and within the limits of their compact made by themselves with the Legislatures—whatever the people, in such a case, still hold ought to be done, that they state as Bills of inalienable Rights and command respectful attention towards them from their representatives, who are the Legislatures of several States.

Among the Bills of Rights that the people have enumerated, as embodying the statement of matters which directly and immediately relate to and concern the welfare of the people, are the following, as enunciated in the Constitution of the States from which the citations are made.

It should be observed that in all those States where the Bill of Right is not enunciated, yet the Legislators are as imperatively commanded to act

and carry forward the wishes of the people in the matters noted following, as they are in those where the Bills are incorporated into the Constitution.

All the States in the United States agree in the practice and in the theory, as indicated in the Bills cited.

Citations of Bills of Rights:

"Religion, morality, and knowledge being essential to good government, the general assembly shall pass suitable laws to protect every religious denomination in the peaceable enjoyment of its own mode of public worship, and to encourage schools and the means of instruction."

(Ark., Const., 1898, Art. 2, § 23.)

"It is a paramount duty of the State to make ample provision for the education of all the children residing within its borders, without distinction or preference."

(Florida, Const., 1868, Art. VIII, § 1.)

"Knowledge and learning generally diffused throughout a community being essential to the preservation of a free government, it shall be the duty of the general assembly to encourage, by all suitable means, moral, intellectual, scientific, and agricultural improvement, and to provide by law for a general and universal system of common schools, wherein tuition shall be without charge and equally open to all."

(Ind., Const., 1851, Art. VII, § 1.)

"The stability and perpetuity of free republican institutions depend upon the intelligence and virtue of the people: Therefore, it is declared to be the duty of the State to establish by law, at the earliest possible period, a uniform system of free schools, in which every child in the State shall be entitled to receive a good common-school education at the public expense."

(Kan., Pro. Leavenw'th Const., 1858, Art. VII, § 1.)

"A general diffusion of education being essential to the promotion of the rights and liberties of the people; to promote this important object, the Legislature are authorized, and it shall be their duty, to require the several towns to make suitable provision, at their own expense, for the support and maintenance of public schools; and it shall further be their duty to encourage and suitably endow, from time to time, as the circumstances of the people may authorize, all academies, colleges, and seminaries of learning within the State."

(Maine, Const., 1820, Art. VIII, § .)

"Wisdom and knowledge, as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties, and as these depend on spreading the opportunities and advantages of education in the various parts of the country and among the different orders of the people, it shall be the duty of the legislatures and magistrates, in all future periods of this Commonwealth, to cherish the interests of literature and the sciences, and all seminaries of them, especially the university at Cambridge, public schools and grammar schools in the towns; to encourage private societies and public institutions by rewards and immunities for the promotion of agriculture, arts, sciences,

commerce, trades, manufactures, and a natural history of the country; to countenance and inculcate the principles of humanity and general benevolence, public and private charity, industry and frugality, honesty and punctuality in their dealings, sincerity, good humor, and all social affections and generous sentiments among the people."

(Mass., Const., 1780, Chap. V, § 2.)

"Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged."

(Mich., Prop'd Const., 1867, Art. XII, § 1.)

"The stability of a republican form of government depending mainly upon the intelligence of the people, it shall be the duty of the legislature to establish a general and uniform system of public schools."

(Minn., Const., 1858, Art. VIII, § 1.)

"Religion, morality, and knowledge being necessary to good government, the preservation of liberty, and the happiness of mankind, schools and the means of education shall be forever encouraged in this State."

(Miss., Const., 1865, Art. VII, § 14.)

"As the stability of a republican form of government depends mainly upon the intelligence and virtue of the people, it shall be the duty of the legislature to encourage by all suitable means the promotion of intellectual, scientific, moral, and agricultural improvement, by establishing a uniform system of free public schools, by taxation or otherwise, for all children between the ages of five and twenty-one years, and shall, as soon as practicable, establish schools of higher grade."

(Miss., Const., 1868, Art. VIII, § 1.)

"A general diffusion of knowledge and intelligence being essential to the preservation of the rights and liberties of the people, the general assembly shall establish and maintain free schools for the gratuitous instruction of all persons in the State between the ages of five and twenty-one."

(Mo., Const., 1865, Art. IX, § 1.)

"Religion, morality, and knowledge, however, being essential to good government, it shall be the duty of the legislature to pass suitable laws to protect every religious denomination in the peaceable enjoyment of its own mode of public worship, and to encourage schools and means of instruction."

(Neb., Const., 1867, Art. I, § 16.)

"Knowledge and learning, generally diffused through a community, being essential to the preservation of a free government, and spreading the opportunities and advantages of education through the various parts of the country, being highly conducive to promote this end, it is the duty of the legislators and magistrates," etc., etc.,—as in that of Mass., p. 19.

(N. H., Const., 1784, Part II.)

"A general diffusion of knowledge and intelligence being essential to the preservation of the rights and liberties of the people, the legislature

shall establish and maintain public schools for the gratuitous instruction of all persons in this State between the ages of five and eighteen.

(N. J., Const., 1873, Art. VII, § 6.)

"The people have a right to the privilege of education, and it is the duty of the State to guard and maintain that right."

"Religion, morality, and knowledge being necessary to good government and happiness of mankind, schools and the means of education shall forever be encouraged."

(N. C., Const., 1868, Arts. I, IX, § 1.)

"Religion, morality, amd knowledge, however, being essential to good government, it shall be the duty of the general assembly to pass suitable laws to protect every religious denomination in the peaceable enjoyment of its own mode of public worship, and to encourage schools and means of instruction."

(Ohio, Const., 1851, Art. I, § 7.)

"The diffusion of knowledge, as well as of virtue, among the people being essential to the preservation of their rights and liberties, it shall be the duty of the general assembly to promote public schools, and to adopt all means which they may deem necessary and proper to secure to the people the advantages and opportunities of education."

(R. I., Const., 1842, Art. II, § 1.)

"Knowledge, learning, and virtue being essential to the preservation of republican institutions, and the diffusion of the opportunities and advantages of education throughout the different portions of the State being highly conducive to the promotion of this end, it shall be the duty of the general assembly, in all future periods of this government, to cherish literature and science."

(Tenn., Const., 1834, Art. XI, § 10.)

"A general diffusion of knowledge being essential to the preservation of the rights and liberties of the people, it shall be the duty of the legislature of this State to make suitable provisions for the support and maintenance of public schools."

(Texas, Const., 1866, Art. X, § 1.)

"Laws for the encouragement of virtue and prevention of vice and immorality ought to be constantly kept in force and duly executed, and a competent number of schools ought to be maintained in each town for the convenient instruction of youth, and one or more grammar schools be incorporated and properly supported in each county in this State."

(Vt., Const., 1793, Chap. II, § 41.)

"A general diffusion of knowledge being essential to the preservation of the rights and liberties of the people, it shall be the duty of the legislature of this State to make suitable provisions for the support and maintenance of public schools."

(N. Mex., Prop'd Const., 1850, Art. VII, § 1.)
(" " " " 1870, Art. VIII, § 1.)

These citations—together with all the practical legislation which is consonant with them, in each and every State in the Union—all these unite

to give expression, voice, to what the people hold to be among their inalienable or natural rights,—the right to encourage schools.

Why this care of the people about education? Whence arises it? All of the natural rights of the people do not find so great attention to magnify them.

Why this imperativeness concerning schools?

Why has society compelled Legislators to encourage and advance all of the youth in intelligence and morality?

Blackstone says: (Chitty, Vol. I., p. 32, Ed. 1870.)

"The only true and natural foundations of society are the wants and the fears of individuals."

"The will of man's Maker is called the law of nature."—(Ibid, p.26.)

"But, in order to apply this (law of nature) to the particular exigencies of each individual, it is still necessary to have recourse to reason, whose office it is to discover, * * * what the law of nature directs in every circumstance of life, by considering what method will tend the most effectually to our own substantial happiness."—(Ibid, p.28.)

The citations before given discover both a want and a fear of the individuals who compose the people—they assume a knowledge of the law of nature—they embody the labors of reason as it has been busy to best apply this law of nature to the "practical exigencies of each individual"—they assume, with the authority of command, that intelligence, schools, are necessary to the well-being of the State, *i. e.*, the people—they show that the people contribute largely of their wealth to support schools—they reveal a firm and an active faith in the benefits of education—they utter a want for schools, and they imply a fear, in that they command their Legislators, not leaving it optional with them as to establishing schools.

Let the benfits that arise because of schools be granted.

In what regions of benefits do they lie? Wherein do benefits arising from education compensate the people for the outlay of wealth which they appropriate by legislation for the support of schools? Upon what theory do people pay material wealth, time, and money for schools?

Is it for ornamenting society? Society is practically quite exclusive—besides, the people hardly respect a mere ornament of society.

The people are eminently practical in this, that they discuss public questions from the stand-point of "Will it pay? Pay in what? Pay in returns, pay in returning a "hard dollar" for "a greenback."

Assume that the people support schools upon the business principle of sure and ample returns in wealth and prosperity for all the outlay. Statistics sustain this assumption.

"Where does this locate the School as an institution."

Chancellor Kent says: (Vol. II, pp. 196-7, Ed. 1867.)

"Without some preparation made in youth for the sequel of life, children of all conditions would probably become idle and vicious when they grow up, either from want of good instruction and habits, and the means of subsistence, or from want of rational and useful occupation."

"That, in 1682, it was said by the first eminent lawgiver of Pennsylvania: 'That men of wisdom and virtue were requisite to preserve a good constitution, and that these qualities did not descend with worldly inher-

itance, but were to be carefully propagated by a virtuous education of youth.' "—(Ibid, p. 207.)

The Chancellor continues: (p. 196.)

"In this branch of political economy Scotland attained to early and honorable preëminence."

Here, then, is the region in which Schools rest—that of Political Economy—that of Wealth.

"Writers on Political Economy profess to teach, or to investigate, the nature of Wealth, and the laws of its production and distribution: including, directly or remotely, the operation of all the causes by which the condition of mankind, or of any society of human beings, in respect to this universal object of human desire, is made prosperous or the reverse."

(J. S. Mill, Pol. Ec., Vol. I, p. 17, Ed. 1872.)

Under "Labor as an Agent of Production," Mr. Mill continues:

(Vol. I, pp. 66–9.)

"There is yet another mode of employing labor which conduces equally, though more remotely, to that end: this is, labor of which the subject is human beings. Every human being has been brought up from infancy at the expense of much labor to some person or persons, and if this labor, or part of it, had not been bestowed, the child would never have attained the age and strength which enable him to become a laborer in his turn.

"To the community at large, the labor and expense of rearing its infant population from a part of the outlay which is a condition of production, and which is to be replaced with increase from the future produce of their labor."

"The technical or industrial education of the community; the labor employed in learning and in teaching the arts of production, in acquiring and communicating skill in those arts; this labor is really, and in general solely, undergone for the sake of the greater or more valuable produce thereby attained, and in order that a remuneration, equivalent, may be reaped by the learner, besides an adequate remuneration for the labor of the teacher, when a teacher has been employed."

"As the labor which confers productive powers, whether of hand or of head, may be looked upon as part of the labor by which society accomplishes its productive operations, or in other words, as part of what the produce costs to society, so too may the labor employed in keeping up productive powers."—(as by physician and surgeon.)

"Another kind of labor, usually classed as mental, but conducing to the ultimate product as directly, though not so immediately, as manual labor itself, is the labor of the inventors of industrial processes."

"Whether mental, however, or bodily, their labor is a part of that by which the production is brought about."

"In a national, or universal point of view, the labor of the savant, or speculative thinker, is as much a part of production in the very narrowest sense, as that of the inventor of a practical art; many such inventions having been the direct consequences of theoretic discoveries, and every extension of knowledge of the powers of nature being fruitful applications to the purposes of outward life."

"No limit can be set to the importance, even in a purely productive and material point of view, of mere thought."

"When (as in political economy one should always be prepared to do) we consider not individual acts, and the motives by which they are determined, but national and universal results, intellectual speculation must be looked upon as a most influential part of the productive labor of society, and a portion of its resources employed in carrying on and in remunerating such labor, as a highly productive part of its expenditure."

Dr. Adam Smith says: (Wealth of Nat., p. 621, Ed. 1871.)

"The State, however derives no inconsiderable advantage from their (the people) instruction. The more they are instructed, the less liable they are to the delusions of enthusiasm and superstition, which, among ignorant nations, frequently occasion the most dreadful disorders. An instructed and intelligent people, besides, are always more decent and orderly than an ignorant and stupid one.

They feel themselves, each individually, more respectable, and more likely to obtain the respect of their lawful superiors, and they are therefore more disposed to respect those superiors.

They are more disposed to examine, and more capable of seeing through the interested complaints of faction and sedition, and they are, upon that account, less apt to be misled into any wanton or unnecessary opposition to the measures of government.

In free countries, where the safety of government depends very much upon the favorable judgment which the people may form of its conduct, it must surely be of the highest importance that they should not be disposed to judge rashly or capriciously concerning it."

As bearing further upon this question of education as a means of advancing the State, it will be pertinent to consider briefly what is meant by progress of society, as a question of Political Economy.

A progressive state of wealth is characterized, following Mill: (Vol II., p. 271-7.)

1. By the unlimited growth of man's power over nature.

2. By a continual increase of the security of person and property. "At the first birth of a nation the growth of individual liberty is the only test of the possibility of moral and social life."—(Science of Law—Sheldon Amos, p. 90.)

3. By a great increase both of production and of accumulation. "It is only in a condition of liberty that industrial occupations can be pursued." —(Amos, p. 90.)

4. By an improvement in the business capacities of the general mass of mankind—because each individual is able to rely with certainty on the others for the portion of the work which they respectively undertake.

Further:

The people, as States, enjoy the security and protection of their natural or civil rights through the exercise of their political rights, which are their rights as citizens, which rights are secured by the Constitution, and by laws.

Hence whatever the State does, in the way of enactments, is done by citizens—that is, voters are the active agents in carrying forward the ends and labors of government.

That is to say: While every inhabitant of a State has civil rights, yet these civil rights are practically in the guardianship of those, and those only, who have political rights, or voters.

That is to say: The natural or civil rights of any given number of inhabitants in the United States are in the keeping of simply a majority of the citizens, subject to constitutional limitations.

Further: Among the various measures that the State creates, encourages, and protects by law is prominently the School—it is created and encouraged as an institution that is purely one of Political Economy, one of increasing production and accumulation of wealth,—and as a "means of preventing pauperism and crime," which is still only wealth.

The original preliminary question is in order now, to be answered.

Do Schools exist, have a being, because of a Toleration, or because of a Right?

The answer is clear: Not because of Toleration, but because of Right—because of inalienable rights which have never been surrendered by the people, either to Congress or to Legislatures—because of the right of the people to the fruits of intelligence and protection from the folly and crime which result from ignorance."

(Judge A. P. S.)

To what end do they exist? To the end that by means of them the people may secure unto themselves increased wealth and protection.

By what means do they exist? By the means of political legislation and provisional enactments, which are in the immediate care of the citizens, or voters.

All the provisions are clearly stipulated in the enactments under which the school springs up and continues to exist.

What life, or existence, then, has a school? All public schools?

All public schools have the life of positive enactment—the life of political continuance—the life of the government that created and established them.

The first of the original questions is now in proper order:

I. What is a School?

1. A School is an Institution for increasing the wealth and protection of the State, created and fostered by the political rights of citizens, and which is thus an expression of the reserved inalienable rights of the people.

2. Or: A School is a political Institution for increasing the wealth of the State, and whieh is created by the natural rights of the people.

3. Or: A School is a political and economic Institution that is an expression of the natural rights of the people.

4. Or: A School is an Institution in the Political Economy of the State, founded upon the natural rights of the people.

5. Or: A School is an Economic Institution founded in the inalienable rights of the people, but created and fostered by the citizens of the State.

6. Or: A School is a Political Institution created by the citizens (voters) of the State for economic purposes which rest within the natural rights of the people.

7. Or: A School is a medium through and by which the State advances the welfare of the people, using education as the means.

8. Or: A School is a Civil Corporation, established to facilitate the economic interests of the State, to be attained by means of education.

For: (Bouvier—Law Dict., Art. "Corporation.")

"Corporation. A body, consisting of one or more natural persons, established by law, usually for some specific purpose, and continued by a succession of members."

The succession, perpetuity, or "immortality" of a corporation is that which constitutes its principal utility.

"Civil Corporations are those which are created to facilitate the transactions of business."

"The sovereign authority only can create a corporation."

NOTICE:

1. That Sabbath Schools are not within this—for they are but a part of a church organization. Hence the Legislation which controls Churches also regulates Sabbath Schools. In a sense Parochial Schools are wholly Church Schools, under legal control through the Church.

2. That Schools which are in every sense Private Schools—schools which exist only, and solely, as an agreement between one person and another—these schools are not included in the above.

For they are only pure matters of individual business relations—they are, in a large sense, not schools at all—they are but places of business, or items of occupation, which aim at the money returns to the teacher—just as that of any other day laborer.

3. That the Schools included in special in these definitions and considerations are all those schools which have a life from the State, as corporations.

Such are:

(*a*) All Public Schools, so called.

(*b*) All State and government Schools of any kind.

(*c*) All Schools which have managing Boards, which act under legal charters, of whatever kind.

(*d*) All Charity Schools which exist under Boards, or charters, or grants.

II. WHAT ARE ITS RIGHTS AND DUTIES?

It has been shown that schools are corporations—that they are created only by the sovereign authority, that is, the citizens or voters of the State—that they are civil corporations for facilitating economic interests of the State.

POWERS OF CORPORATIONS:

(Bouvier—Law Dict., Art. "Corporation.")

"Subject, however, to such limitations as these (their charters), or general statute or constitutional law, may impose, every corporation aggregate (if two or more members) has, by virtue of incorporation and as incidental thereto, *first*, the power of perpetual succession, including the admission, and except in the case of mere stock corporations, the removal for cause, of members; *second*, the power to sue and be sued, to grant and to receive *grants*, and to do all acts which it may do at all, in its corporate name;

third, to purchase, receive, and to hold lands and other property, and to transmit them in succession; *fourth*, to have a common seal, and to break, alter, and renew it at pleasure; and *fifth*, to make by-laws for its government, so that they be consistent with its charter and with law.

Indeed, at this day, it may be laid down as a general rule that a corporation may, within the limits of its charter or act of incorporation express or implied, lawfully do all acts and enter into all contracts that a natural person may do or enter into, so that the same be appropriate as means to the end for which the corporation was created."

Further:

"It is settled that private corporations in the United States, can not be repealed, impaired, or altered at pleasure, against the consent or without the default of the corporation, judicially ascertained or declared."

"Public corporations may, in the United States, be altered or repealed at pleasure."

Again: (Bouvier—Law Dict., Art. "Construction.")

"One leading principle of construction is to carry out the intention of the authors of or parties to the instrument or agreement, so far as it can be done without infringing upon any law of superior binding force."

"When the Legislature grants to any body or person a privilege, it grants by implication everything necessary to the enjoyment of that right or privilege." (M. M. W., Advocate.)

Note: It should be observed that a right or privilege has nothing to do with the means, or money, by which it is to be enjoyed.

A right to build a railroad does not supply the means which build it.

From the above:

It appears that a corporation can be dealt with the same as a natural person.

It was shown, early in this discussion, that rights exist and inhere between natural persons. Hence corporations have inherent rights. It will also be recollected that rights grow out of well-founded claims.

Again: ("Parsons on Contracts." Vol. I. pp. 3–5.)

"The Law of Contracts, in its widest extent, may be regarded as including nearly all the law which regulates the relations of human life. Indeed, it may be looked upon as the basis of human society. All social life presumes it, and rests upon it: for out of contracts, express or implied, declared or understood, grow all rights, all duties, all obligations, and all law. Almost the whole procedure of human life implies, or, rather, is, the continual fulfilment of contracts.

Even those duties, or those acts of kindness and affection, which may seem most remote from contract or compulsion of any kind, are nevertheless within the scope of the obligation of contracts." * * * *

"It would be easy to . . show that in all relations of social life, its good order and prosperity depends upon the due fulfilment of the contracts which bind all to all.

Sometimes these contracts are deliberately expressed with all the precision of law, and are armed with all its sanctions. More frequently they are, though still expressed, simpler in form and more general in language, and leave more to the intelligence, the justice, and honesty of the parties.

Far more frequently they are not expressed at all; and for their definition and extent we must look to the common principles which all are supposed to understand and acknowledge.

In this sense, *contract* is coördinate and commensurate with *duty;* and it is a familiar principle of law, very general, yet not universal, that whatsoever it is certain that a man ought to do, that the law supposes him to have promised to do."

"These contracts form the web and woof of actual life." (Ibid.)

"Subsidiary to these are the rules and processes of the law, by means whereof a contract, which in itself is good, and has been properly construed, and is free from all removable elements of wrong, is enforced, or carried into execution." [Ibid.]

From the above:

It follows that because a man is a citizen, therefore he is under a contract with that society and State to discharge his duties to that State (Legislature)—he is under obligations to the State, and these obligations have duties and rights, as related to both parties to the contract, the citizen on the one hand and the State on the other.

That is, the State having this power of right, can direct or command the citizen to serve it.

To this end the Legislature enacts Laws or Bills, in due form—which enactments thus become imperative upon the citizens, because of the elementary and original contract, before noted.

That is: Enactments are commands by and from the State upon the individual citizens or inhabitants of that State.

Or:

Enactments are directions from the State, which enable its citizens and inhabitants to fulfil their contracts with the State.

"And if the legislature representing the State, fails in its duty, the people who create it have a right to substitute other representatives, who will recognize the obligations of the State." Judge A. P. S.

These enactments are obligations as between the State and the other party, be it a man, or be it a corporation.

Obligations rest, at either extremity—*i. e.*, at the place of either party holding thereby—upon *rights* and *duties*—rights imply duties, and duties necessitate rights.

Because of an obligation, each of the parties to it thereby incur, or assume, certain rights and duties that are imperative.

RIGHT DEFINED:

"A right is *a measure of control delegated by the supreme political authority of a State, to persons said to be thereby invested with the right over the acts of other persons said to be thereby made liable to the performance of a duty.*"

(Sheldon Amos—"Sci. of Law." p. 97.)

From the same:—(pp. 95–7.)

"A legal *right* is seen, first of all, to draw all its validity from the direct interference of the State. It may or may not correspond with a co-existent or antecedent *moral* right. It may be more or less extensive than such a right. But in all cases, it arises purely from the energy of the law

itself, as expressing the will of the supreme political authority, and its validity must be judged from a political, and not from a moral stand-point, —if ever these two can be opposed to one another.

When the State thus imparts a right, it concedes to one of its number a limited amount of its own indefinite power of control over all its subjects. Instead of directly infringing (as it has power to do) the liberty of certain of its citizens, it concedes or delegates to certain others of its citizens the capacity of infringing that liberty. The State, strictly speaking, operates by both methods. It sometimes, indeed, infringes or restrains liberty directly by its own immediate act, in imposing duties without making any rights co-extensive with them; or, at the least, where the rights thereby accorded to private persons are treated as of subordinate importance.

The State also acts . . . by parting with some of its controlling power to the persons to whom it concedes rights. It marks out their realm of free action, and the corresponding limits upon the free action of others. The State promises the aid of all its machinery of justice and police (though sometimes illogically, on condition of payment for its use) for the support of the liberty it concedes, that is, of the rights of the persons who are thus favored by the State to the immediate disparagement of the rest.

In consequence of the existence of the right, one man can do more and another less than he could do in the absence of it. The right in every case comes directly from the State, and owes its continuing validity to the State. The law expresses in detail the nature and limit of the right, the mode in which it accrues, the circumstances through which it may be lost, and the modes of its protection or of obtaining compensation for its violation."

It thus appears:

(*a*) That a school is a corporation.

(*b*) That this corporation is under obligations to the State which created it by enactment.

(*c*) That these obligations determine the rights and duties involved in the case.

(*d*) That the above is true whether the school be established under some general law, or under some special charter—for in both cases the State has parted "with some of its controlling power to the persons to whom it concedes rights;" and the "State promises the aid of all its machinery of justice and police for the support of the liberty it concedes."

Whence:

(*a*) A school has rights and duties—but they are strictly legal—and they grow out of the command from the State directly, and "owe their continuing validity to the State."

(*b*) A school is really a corporation, which corporation is virtually that which the State creates, viz., a Board of Trustees, having rights and duties specified by law.

(*c*) That is: The Board of Trustees, or incorporate Board of

whatever name, is the medium of management and responsibility between the State on the one hand, and the people on the other.

(*d*) It is the case, frequently, that some other officers appear on behalf of the State, as aids to Boards, and they are appointed also by the State, as commissioners, superintendents.

Whence, further:

As a school is a civil corporation, established to facilitate the economic interests of the State:

As this corporation is virtually a perpetual representation in and by a Board of Trustees of Supervision:

As the people have their immediate compact with the State:

As the people have commanded the State to establish and foster schools:

As the State has complied, by enactments which create these Boards of Management:

As these Boards are endowed with well-defined rights and duties by express or implied law:

From all these it follows:

That a school is a sort of double entity—a two-headed duality—it faces the State in its rights and duties—and it faces towards the people in rights and duties.

Recall the rule of law construction which was given before: (Page 179.)

Whenever a Power is given by the Legislature, everything necessary to make it effectual or requisite to attain the end in view, is implied:

"And keep in mind the principle that schools for the children develop intelligence, or the capacity of learning well and quickly; and, accompanied by thorough and correct teaching, develop man into an obedient citizen and a skilled workman who recognizes easily the Power, Goodness, and Wisdom of the Creator, and who, without compulsion, observes the immutable Laws of Good and Evil to which the Creator Himself, in all His dispensations, conforms; and which are necessary for the conduct of human actions in well-governed States—to wit, such as "among others that we should live honestly, should hurt nobody, and should render to every one his due:"

Thus doing willingly without the cost of compulsion by the costly enginery of government or standing armies, and saving to the State not only the expenditures requisite to guard and guide the ignorant, the savage, the vicious and the idle, but thereby giving to the State the aid which always accompanies intelligence, virtue, and wisdom:"

(M. M. W., Advocate.)

Whence, attending directly to the main question:

A. Rights and Duties of a School, facing towards the State:

These are:

Right 1. A foremost right of having conscientious and able Boards of Supervision and Control—and this, whether the Boards are appointed directly by the State, or whether they are elected by the people in any of *their* various capacities.

For: The establishing of a corporation for specific purposes necessarily implies that there can and should be commanded the requisite ability and integrity to realize those purposes.

Otherwise such legislation is stultification.

Right 2. A right to sufficient financial support from the State—furnished either immediately by the State, or immediately by local taxation—to render effective the true intent of the State in creating the corporation.

For: Unless this be supplied, the "sinews of war" will hardly be able to do much that can satisfy any who are interested parties.

It is a principle of business that no income can reasonably be expected where there is no capital invested.

It is a mere commercial consideration—no capital stock invested, no income.

Right 3. A right of an active and sacredly jealous general oversight from the Legislature—it is the right of a School to enjoy this feeling of interest in it.

For: The people should infuse the very sympathy of warm life into the Legislature, its polished unit—this Legislature, being the source of these rights and duties, should have a most watchful care over its enacted creations.

Unless this be the practical state of things, all such corporations must fall into a state of demoralization and inefficiency. The School has a right to this stimulus of oversight.

The Legislatures are the Head-Quarters of the people—unless there be vigilance and energy at the Head-Quarters, the rank and file fall into easy-going ways that do not prepare for important campaigns, either offensive or defensive.

Duty 1. Rights 1, 2, and 3, being assumed, there necessarily follow the correspondies duties:

(*a*) For the right to an able Board, there comes a faithful discharge of the various details that come within the scope of the labors of that Board.

(*b*) For the right to a proper financial support, there follows the duty of a wise expenditure of the same—the same wisdom that is required to invest any sum of money in order to insure the safest and largest returns.

(*c*) For the right to general Legislative oversight, there grows up the duty of supplying such results—both in kind and in quantity—that the State can feel in no manner otherwise than that the income fully warrants and approves the expenditures and cares bestowed.

Duty 2. The School has a duty to itself—that it shall so conform itself to principles of business and integrity that it can rest easily in the presence of itself alone.

It is not enough that one secure the good will of others—it is also essential to a permanent growth that there be added to the above a wise self-respect.

Long life and strong fibre are of solid growth—from the centre outward—a kind of exogenous development.

The School being an Institution midway as between State and people, its duty is to bear itself upright, with inclination neither to the one hand nor yet to the other.

B. RIGHTS AND DUTIES OF A SCHOOL, FACING TOWARDS THE PEOPLE.

Right 1. It is the right of a School to have the cordial and energetic support of the active sympathies of the mass of the people.

The people are the final financial support of the School—the Institution should be of vital interest to them.

Right 2. It is the right of the School that it have, as its active executors in the employment of the Board, Teachers of energy, of scholastic ability, of executive ability, equal to the importance of the responsibilities involved in the case.

For: If there be a failure here, substantially all is a failure—yet not all, for the Superior Management, the Board of Control, has a right and duty of quick and sure cure—that is, to install another Instructor at once.

But it is true that here is a point of dearest interest, the choice of the Instructor.

Notwithstanding all this, it is the veriest right of a School to have an able body of Instructors—nothing should defeat this right.

Right 3. It is the right of a School to be patronized by the citizens.

For: Unless they are thus patronized by the citizens the Schools are non-productive Institutions—the machinery all there, but no material out of which to work wealth for the public progress.

Right 4. It is the right of a School that the people keep a critical inspection upon and within it—that they may become informed personally as to the quality and quantity of labor therein done.

For: If this be not done, there may grow up inadvertently and unadvisedly between the School and the people, theories and practices which fail of returning to the citizens what it costs them.

Right 5. It is a right of the School that there be good accommodations, as to house and furniture.

The general business principle is, to all practical purposes, that the most attractive accommodations afford the surest returns.

Right 6. It is the right of the School, that it be well supplied with necessary and useful apparatus, books, etc.

For: Business dictates that a road-bed and rails do not constitute a paying railroad—rolling stock sufficient to do the work in immediate hand, and to invite renewed undertakings in business, because of increased facilities, these are what judicious business shows are good investments.

Right 7. It is the right of the School that it have a judicious curriculum of studies.

For: If the studies are ill adapted to the circumstances of the people, to the genius of the times, and to the evident progress of the people, they are expenses without corresponding returns.

Right 8. It is an inalienable right of the School that it be based, in its daily administration, upon religion, morality, law, virtue.

For: The people, being controlled in political administration of government, by the citizens, or voters, have the natural right to demand *honesty, virtue,* integrity in their voters.

The Schools help to educate the voters for the people. Hence the conduct of the voters, directly or by representation, is but the reflex action or result of the education furnished in the Schools. And the matter of home and family education is largely in sympathy, also, with that given in the Schools.

Right 9. It is the right of the School that the Instructors—who are simply the agents of the Board towards the people—are wholly and cheerfully to the School interests, and to the Board which employs them.

For: It is a well-settled principle of successful business that there can be, safely, but one responsible managing power. Success and safety do not exist where there is an independent power within a power also independent. Harmonious perpetuity is hardly found where there is an "imperium in imperio," a government within a government.

Right 10. It is the right of the School to expect entire loyalty and subordination from those who attend the School as learners—they, by asking admission to the School, contract to do loyal service.

For: Except this be so, failure is the inevitable result. Besides, the expenses incurred in establishing the School enforce the claim of loyalty —and the same rights that can create a School should make imperative the subordination to them that is necessary to secure the reasonable returns anticipated.

Right 11. It is the right of the School to teach those things which will better qualify its learners to become able and wise citizens, and conscientious and unselfish legislators and magistrates.

Right 12. It is the right of a School to insist upon, and enforce, that form, and those modes of discipline, which shall best establish the youth in those habits of self-control and of integrity that are needed by the wise citizen. Those principles of condnct that confirm the people in their progress are, by right, those of the School.

Duty 1. As before, each right involves its corresponding duty:

(*a*) To claim sympathy imposes the duty of cultivating and utilizing it.

(*b*) The right to have able instructors involves the duty of regard and support, that they may be free to exercise their powers and learning.

(*c*) The right to claim public patronage demands the active duty of making the school worthy of this patronage.

(*d*) The right to claim the active criticisms of the people involves the duty of profiting by such criticisms.

(*e*) The right to a good house puts forward the duty of properly appreciating it, of caring for it, of protecting it.

(*f*) The right to claim apparatus, etc., brings forward the duty of using such apparatus to its best advantage for the school.

(*g*) The right to a proper curriculum of studies renders it a severe duty that such curriculum be conscientiously followed, until it is changed by the proper authority.

It is a violent breach of duty when a curriculum is adopted or cast aside at the mere pleasure of the Instructor. It should never be tolerated by a Board of Control.

(*h*) The right to religion, to morality, to virtue, to law, emphasizes the duty that their fundamental principles be daily held to in the daily workings of the school—that the whole management make it plainly visible that these principles are the vitality of daily administration in the Institution.

(*i*) The right of the School to claim loyalty and cheerful compliance from its Instructors, with its requirements, causes the corresponding duty of enforcing it, if necessary, to assume an imperative tone.

For, no kindness is shown any person by allowing him much liberty in the matter of insubordination to just and wholesome authority. There is a leniency that is to the perpetual harm of him to whom it is shown. The very soul genius of our Institutions is loyalty to authority because it is authority. Business can not go forward without this subordination of employé to employer.

(*j*) The right of a School to demand proper respect and subordination from the learners brings forward powerfully the duty of the School to insist upon them at all hazards. For: All the former reasons herein stated for loyalty are equally imperative here—and there is the added consideration of habits of loyalty to be inculcated in the minds of the young. Any School which ignores, or which is too feeble to command proper loyalty from its attending learners —any such School is a public misfortune. It would seem that such a School should be amenable under the laws as a public nuisance, and should be abated with promptness and decision.

(*k*) The right of a School to teach those subjects which shall prepare the youth to become abler and better citizens, gives the duty that these subjects shall be taught in the School. To neglect them is to neglect some of the vital interests of the people. Studies that are of right, and that are necessary, are, hence, imperative—they can not be neglected without its involving a violence against the people, which is of the nature of a crime.

(*l*) The right of a School to enforce sound disciplinary principles implies and commands the duty of determining what they are, how they can be best applied, and of judicious instructions thereabout before the youth.

III. SOME CONSEQUENCES FROM THE ABOVE PROPOSITIONS.

1. The School does not become the property of the people, or of the Board of Control—it belongs, directly or remotely, to the State. The people only reach it through the State.

2. The School is not the monopoly of the few, in their interest exclusively—it is the medium of direct well-being to all the people. Hence its curriculum of studies should have regard unto the needs of the whole people.

3. The School being of the people, for the people, it should be supported by the property of the people, by taxes.

4. A School is a Business Institution, created for specific purposes—it should be conducted in all of its management upon the principles of

Business. Its Business is to assist as being one among the many Corporations created and fostered by the State—in increasing the wealth, by increasing the productive power of the State. These ends are served when the attending learners are acquiring sound knowledge in the sciences and in the arts—when they are learning to respect authority—when they are cherishing a proper self-respect—when they are understanding their relations to their peers—when they are establishing the imperative habits demanded by Business—when they are founding all their dealings upon the general principles of law, morality, religion.

5. The School is not the place to teach untruth—it should teach upon foundations of fact, so far as possible, in the most generous latitude. Schools are not places in which truths of Science or of History should be modified, or warped to suit this or that Instructor, or agent, as he shall please. The people have a right to these truths, plain, unvarnished, unbiassed.

6. These Schools established by the State, in whatever manner, are not places in which the particular creeds, or special beliefs and faiths of any particular sect or schism should be taught or tolerated. This is the work of another Institution, which is also protected and fostered by the State.

But on this point it should be observed that Schools have the same rights as those of any other Corporation which is created for a special end. These ends, with schools, being good citizens as to law, and morals, and religion, it would seem a just right of the School that these should be practically adopted into the daily management of the School. Let it be carefully observed that the faiths and practices of any one sect are not necessarily the essence of religion—and that religion, morals, law, are broader in foundations than are apt to be the faiths and practices of any one sect.

This article puts forward a claim for religion, morality, law, being essentially all one—but not a plea for this or that special practice or faith and doctrine.

7. The School is not the place to indoctrinate the learners with any of our various political theories to the exclusion, or at the expense of any other theory. But this should not be construed to prohibit all political teaching—all the fundamental principles of our States and of the nation should be earnestly in practical exhibition before the view of the attendants. Our Institutions can only be upheld permanently by wisdom and knowledge relating to the principles underlying them. The youth have a right to that knowledge which shall enable them, when becoming citizens, to "act well their part." It is the duty of the School to give of this knowledge, as opportunities shall offer.

8. A School—from the interests it involves—is no place in which to experiment with wild and visionary theories, put forward by instructors to whom nature has been partial in her endowments of energy and unalloyed zeal. The School is no more the place for this than is the government which creates the School. Hence, schools should be conservative rather than radical—and no step should be taken that has not previously been coolly and impartially considered by judicious minds.

9. A School, as an Institution, needs as its first officer, a mind that is

characterized by at least these two points:—A decidedly-executive ability —and a well-balanced, candid, judicial discrimination, with decided firmness.

A mind that is too intensely that of the advocate may have its proper uses in the list of Instructors—but it is hardly that of chief officer. This necessity is the same as that in any chief executive, as governor, or president, or chief justice of the Bench. His duties are to serve all—not himself, not this or that party, but the people and the State. This forbids extreme advocacy in the executive. Without superior executive ability in supervision a school can hardly hope to succeed.

10. The School is not a Home.

(*a*) It is created by law wholly—it has not natural rights—its rights and duties are wholly political or legal—it does not belong to any one citizen—it allows of, and recognizes only civil relationships among the members of the Board of Instruction, and of attendants —it cherishes no natural ties, for it has none—its life is that of the government which created it, and is perpetual, suppose, and entirely independent of the life of any one man, or of any body of men —it is under the duty of allowing applicants to enter it—it even advertises for more learners to enter it—its authority is wholly legal, and not natural.

(*b*) A family—the Home—is almost the very opposite of all this. It is true that law regulates the Home in some part, but this regulation is largely secondary—the natural rights and ties, and duties, predominate—the Home is the cradle of the children—it is the place where seclusion is imperative—it is legally, as well as naturally, bound to provide for the sustenance of the children—it is the place where the relations of the natural affections are permitted expression. Would it become a great day in our civilization, that day to be marked with a "white stone," that one in which the School should become as the Home in expressions of natural affections?

The Home, not the School, is the place where the life of the parents is continued in that of the children. The Home, not the School, is the place where the little child can sob itself off to sleep in the mother's arms, not disturbed by the gaze of profane eyes. The Home, not the School, is the place where hearts bleed, and refuse to heal, because of the ruin that stares the boy in the face—the boy of the Home, not of the School.

A beloved Instructor had to decide upon the merits of prize essays upon a certain day, in presence of his class—the day preceding he buried some member of his family—upon time, he appeared before his class—he arose—he bowed his head, while the youth sat impressed—he said: "I must ask to be pardoned for not having done this work—I could not see the words from this valley of the shadow of death!"

This man spake from his Home, not from his School.

When a pupil or student dies, the School forgets it, shortly—but when the child leaves the Home to go to the grave, the vacancy is *never* filled. The Home holds itself intact from infancy to age—

the School lives on, and is always in the hands of the active and the capable. Homes are more dear and valuable, and more to be cherished because they have the helpless and the infirm therein, the wee babe and the unsteady tread and voice of the grand-parents; but schools have no nursery nor easy chair for such as these.

The Home is the place for natural affection—the School, for the common civilities and regards of society, and for the bonds of social friendships, and for the accomplishment of Business, hard and imperative. The Home has friends by natural rights—the School establishes legal and civil rights only. In the Home all are blood relations—in the School there is no such thing possible—the State has no power to create blood relations. Some even almost wish that those in authority could have no blood relatives, and while this might be well for legal relations, yet its desirability otherwise is a subject for grave question!

These remarks upon the Home and School have been somewhat extended because it is feared that those often quoted words, "in loco parentis," are not sufficiently understood. They are almost without meaning—for all they can mean is this: that the State has given the School, as a corporation, certain authority—some of which authority is not unlike, in kind, that which the parent has by natural and civil right. But this authority belongs exclusively to the School—not to the Instructor, except as the Trustees delegate it to him.

Because a conductor of a railroad train has the right by delegated law to expel a noisy and boisterous passenger, or a three-card-monte gamester—and because a principal of a school enjoys the same rights, do we say that the principal stands *in loco conductoris?* Hardly, although there seems to be as complete an analogy in the case as in the other. "In loco parentis" means only that the State has given the Trustees authority in this or that direction—in the direction, as to its exercise, which resembles that which the parent seems to have by natural right. In fact, there can be no similarity between the Instructor and Parent, as related to the possession of the rights involved in the case—that of the Parent being natural, that of the Instructor being legal.

11. The School being the creation of the State, and the interests involved being so vital, it would seem to be a legitimate and necessary consequence that all schools should * as to their advancement by the States. Hence, all work having for its end the bettering of the factors in the efficiency of the schools—in especial the Instructors—all such work should be under control of the same power that has authority over the Schools.

Unless this be the case there must arise discrepancies, and a diversity of interests and views that can not secure as certain results as are desirable. Besides, unless this be so, over-zealous ambition, dangerous radicalism, and unwise indiscretion have power to harm delicate interests to a

[* The writer of this paper has evidently inadvertently omitted in his copy after *should*, one or more words, which the printer is unwilling to attempt to supply. The reader should look for the writer's correction in a note at the end of this volume.—*Printer.*]

deplorable degree—and the door is also open for admission to men whose interests in a school is measured by the amount of money it will bring them. It should never be forgotten that while a School is an Institution created for economic purposes, to increase the wealth of the people, yet this wealth consists in the power to create material wealth, rather than in that material wealth itself. As well might one talk of establishing a State government for the express purpose of enriching the coffers of its officers, as to talk of creating a school for the purpose of enriching in material wealth, the Board of Instructors, or youth attending.

It does not help the case to answer that men have grown rich by means of establishing private schools. There are exceptions, and it is a question of not a little gravity whether the people have been as fortunate in securing returns in sound education and elevated manhood, as those men have been in regard of material wealth.

A School is an Institution—the Bench is an Institution—the management in both cases are equally bound to have no moneyed interest in this matter, in special, if the best discharge of conscientious and impartial labors is to be expected.

Hence all Teachers' Institutes, and all Normal Schools, and all chairs of Pedagogy in Colleges and in Universities—all these should be under the control and supervision of the State.

12. It would seem a proper inference from this discussion that the Normal School has its field very definitely bounded.

For: the State has, in its schools, provided for a general education—the State desires to better its Instructors—it establishes Institutions expressly for this purpose, viz., to do just what the other schools do not do,—that is, give professional tuition—that, and that only.

The difference between the provinces of a School and a Normal School is clear—for, as in Law, so in education—every one who knows Law is not thereby a lawyer, for the application of this Law to this case, how it shall be successfully done—this is the very essence of the Profession of Law. So, in education, how to apply this subject-matter to the case in hand, the best development of this child—this is the very essence of the Profession of the Educator.

13. It would appear that a chair of Didactics simply, can not serve the full purposes of a Professional School. In Law Schools Moot Courts form a central importance—they afford the test of practice. So, Normal Schools are hardly complete in education, without schools for Practice.

14. A legitimate inference would seem to be that the attempt to carry forward both the Scholastic and the Professional investigations at the same time by the student, is attended with somewhat of hazard. For: the two fields being so wholly distinct—and both requiring the undivided ability of the students and Instructors—there must be suffering somewhere, either in the Academic scholarship or in the Professional skill. To be learned in science, as a scholar, does not confirm one as established in the Profession of Literature—so, knowledge of science is not confirmation in the Profession of Pedagogics.

15. Another consequence would be, with Professional Schools occupying their special and proper sphere, that they would establish the Profes-

sion as no other means can—they would elevate it into the highest rank, and that right early.

For, as in Law: (Forsyth, "Trial by Jury," p. 10.)

"As the affairs of civil life become more complicated, and laws more intricate and multiplied, it is plainly impossible that such persons, by whatever name they are called, whether judges or jurors, can be competent to deal with legal questions. The law becomes a science which requires laborious study to comprehend it; and without a body of men trained to the task, and capable of applying it, the rights of all concerned would be set afloat—tossed on a wide sea of arbitrary, fluctuating, and contradictory decisions."

As the Science and Profession of Law are grown up, as stated above, so must the Science and Profession of Pedagogics grow up—and Normal Schools are the special schools entrusted with this profound labor.

16. An inference is, that children are legally entitled to enter the schools —they have no natural right there.

Finally: The attempt has been made to outline a School, that it might be viewed by itself—that the boundary lines might be well established—that its own grand proportions may be studied in its own contour—that its beginnings, foundations, may be considered whether they be safe—that its purposes, whether they be wise, may be scrutinized—that its means and appliances, whether they be ample, may be understood.

If this discussion has helped to bring up before us more vividly, and in clearer light that Institution in which we labor, that corporation which honors us by employing our experience, then is the hope of the writer accomplished, and his desires fulfilled?

The paper was discussed by L. H. Soldan, Principal of Normal School, St. Louis, Edward Brooks, D. B. Hagar, Principal State Normal School, Salem, Mass., C. C. Rounds, Principal State Normal School, Farmington, Me., and J. H. Hoose.

Adjourned.

Second Day's Proceedings.

TUESDAY, JULY 11, 1876.

The Normal Department was called to order by President Brooks. The Secretary being absent, the President appointed J. H. Hoose Secretary *pro tem.*

J. H. Baldwin, Principal of State Normal School, Kirksville, Mo,, presented a paper on The Relations of Normal Schools to Other Schools.

[This paper has not been received.—*Printer.*]

The paper was discussed by Messrs. Geo. P. BEARD, J. H. HOOSE, S. H. WHITE, FELLOWS of Iowa, BALDWIN, J. B. MALLON of Georgia, J. R. MALONE of Texas, ROCKWOOD of Wisconsin, W. E. CROSBY of Iowa, L. H. SOLDAN of St. Louis, and Miss S. A. STEWART of Milwaukee, Wis.

A paper was then presented by C. A. MOREY, of Normal School, Winona, Minn., on the question,

WHAT MAY NORMAL SCHOOLS DO TO FORM RIGHT HABITS OF THOUGHT AND STUDY IN THEIR PUPILS.

There is an old maxim, that children should be taught that which they are to practice in after life. For obvious reasons this has been the subject of much dispute.

In the first place, much that is practical depends upon that which is purely theoretical; and in the second place, much which can never be practical in the ordinary meaning of the maxim, is, considering the child's whole nature, as thoroughly practical as anything he can be taught.

For years theorists have quarrelled over courses of study, the plain, matter-of-fact men insisting upon an adherence to the maxim; others claiming that the studies which merely discipline the mind, should take precedence. Of late years there has been a compromise between these factions; or, rather, both have carried their points, as is usual in arguments. But in either case, or in both combined, the great object of the schools and of the courses of study, is to have the pupils acquire as much matter as possible. Now admitting that both are right, it would seem that in this sense both are wrong. If the matter of a child's ordinary school course is ever so well chosen, it can only be a beginning; a foundation upon which *he himself* must build the superstructure of culture and growth. This being true, it becomes very important that the *manner of building* the foundation should be an index of the whole work. In the school he should not only learn how to do the work of the school, but how to go on working after he gets out into the world. To this end he must learn how to study and how to think. He must learn how to paddle his own educational canoe, and to steer it as well. Then by proper exertion and ambition he may drop his oar into one of the many rowlocks of life, and help to move the world onward.

Children cannot be taught how to study and think properly by one who himself is but indifferently qualified. Therefore Normal Schools have an important duty in this respect. As the pupils in these schools are taught, so will they teach; and the influence of their work will go on forever.

What, then, are right habits of thought and study? and how shall they be established in normal pupils?

Neither question is easily answered. There must be a profound love of truth, and a desire for investigation; a sound logic, or knowledge of the laws of reasoning; the power to read rapidly and to observe closely; and the ability to generalize, and to apply facts to the purposes of life.

Culture includes much more than is usually taught in schools. It can not be tested by written examinations nor expressed by a per cent. It

consists more in what a man can *do*, than of what he remembers. It implies an understanding of the real uses of knowledge, and of the true purposes of life.

To make teachers who shall have this love of truth, and broad culture, Normal Schools must in the first place choose their material more carefully. Everything that comes to a mill will not make flour. At the first all those who will make teachers cannot be separated from those who will not; but it does not take long to determine them. It is difficult, sometimes to make pupils understand it, but it is far better for all concerned to graduate only those who have at least a moderate amount of talent for teaching.

Perhaps the first important thing for the pupil-teachers to learn is the proper use of books. It is useless to cry down text-books. All books are text-books, whether used in schools or not, and teachers must know how to use them. The practice of memorizing lessons is going out of fashion in *association speeches, and educational papers.* It still sticks fast in the schools because pupils are not shown how to use books in any other way. I remember with much pleasure the young graduate of Amherst who first taught me how to get a lesson in Physiology by *reading* it. There was a large class of us in the high school, and we began as usual by memorizing the whole lesson. He forbade it, and showed us the better way; we were astonished that such a thing could be done.

The reading-lessons in schools should be made to develop this power. Too much elocution is taught. The lessons of the day should be read in class for the ideas in them, without particular reference to the tone of voice or the quality of the emphasis. If a class thoroughly understands a paragraph in the Natural Philosophy, nine out of every ten of them will read it well.

But it is no easy matter so to read a lesson as to notice and remember all that is important in it. Pupils will skim it at first, and it is for the teacher to show them how to dive for the complete ideas and hidden meanings. All the nooks and corners should be laid open in the class; every possible view brought to light and discussed. Then will the pupils begin to see the ideas in the words of the book, and they will soon learn how to dig them out, and to throw away the shells in which they lie. There must be a broad preparation on the part of the teacher. It is not enough that he look over the lesson in *the* book. If he only does that, he will question the class with the book before him, either actually or mentally; and as a consequence the class will be confined to it in their study. They can have no rope longer than his halter.

Cultivation of the memory, however, must not be lost sight of. Many are running to the extreme. Intellectual power depends largely upon the memory; and in turn the best use of the memory depends upon the ability so to collate and join facts together as to form the knowledge of a subject into a compact, closely-related whole. There can be no separation of the two. One recruits; the other drills and organizes the militia of ideas into a regular army, sure, reliable, and always ready for the intellectual encounter.

Young teachers are cautioned against talking too much. The caution

may be taken too literally. It means don't preach or lecture too much. A class should feel perfectly free to express opinions and to ask questions, and this habit is best established by a conversational style of recitation. While the topical method should be largely used, nothing quickens and enlivens a class more than a sharp running conversation upon the leading topics of the lesson. It is a difficult thing for a teacher to manage, for there is the extreme of familiarity and loose talking which will too often be the result. But the teacher who can keep a class within limits will not only succeed in establishing habits of quick and active thought, but he will incite a strong desire for knowledge, and a love of study.

This influence may be seconded and largely increased by the social relations between pupils and teachers. It is time that teachers consider this matter more carefully. The general culture of the pupils of a Normal School may be more advanced by the society of good teachers, than by their regular teaching. Teachers should be accessible at their homes or rooms, and there should be a free system of visiting. There should be reading circles to establish a taste for good books; talking circles to show young men and young women the beauties of the art of conversation; and there should be circles to awaken a taste for art and the beautiful. Here again tact will be required to keep these meetings from degenerating into gossiping and flirting bees. But most young people need to be taught how such gatherings can be anything else.

In these social circles the subject of taste in dress, and in manners can be touched upon to the great advantage of the pupils. A word spoken to a pupil at the right time, in the right way, by a teacher whom he loves and respects, will often change the whole character of his life. There is scarcely a boy in the world who will not exchange his gaudy red neck-tie for a modest black one, if he be asked to do so by his teacher; nor a girl who will not cease to powder her face and frizz her hair if she be kindly told that both are in bad taste. As an objection against a certain Normal School in the west, it was said that its pupils came home to the country districts so much better dressed, and with such improved manners that their companions at home were ashamed to associate with them. There could be no higher compliment paid to the school.

Habits of close and accurate observation can best be formed in Normal Schools by the study of some one of the physical sciences. The more of them the better; but at least one should be pretty thoroughly handled. If a class can perform for themselves the experiments in Eliot and Storer's Chemistry, and be held strictly responsible for seeing all that there is in them, they will be upon the right road in this direction. There is no one study that so opens the intricate problems of nature to young persons in so short a time as elementary chemistry. There is no one which will broaden the minds of a class more, or fit them better for after-work without teachers. But it is the experiments performed by their own hands that are valuable. It is not the recitation, nor seeing the Professor manipulate the apparatus. To awaken enthusiasm and sharpen their faculties the knowledge must come direct from the operations. Very many experiments may be devised by a class using apparatus extemporized from ordinary utensils. At Winona a class of twenty studied general chemistry

a year, each one performing the experiments in the course, at a total expense of $29.00. They were required to fit up the apparatus for each experiment, and were not allowed to leave one until it was entirely successful. The result was not only a good knowledge of the subject, but a facility in handling apparatus which enabled them to perform the most difficult experiments before the school with scarcely a failure.

As a rule pupils are not thrown upon their own resources enough. Their latent powers are not developed because everything is made too easy for them. It is so easy to help them over the rough places which we have travelled so often, that it requires a considerable effort to forbear. In discipline a similar evil prevails. Too many schools treat young men and young women like children. They are given to understand from the beginning that no confidence is placed in them, and, therefore, that they will be strictly guarded and governed. It is no wonder that young men rebel from such surveillance. In the German Universities pupils are supposed to be persons of common sense who know what they want, and how to behave themselves. They take every pupil to be an honest one until the opposite appears. In most of our schools, and even in our colleges we proceed upon the opposite supposition. To study well and to think well, the pupils of a school must be kept cheerful and happy. To this end there must be plenty of music. A good music teacher is a necessity in a Normal School. We all know how the hymn rests and enlivens us after a long sermon, and how important the music is in long Commencement exercises. It is the same in the school. The pupils are refreshed by joining in a chorus, and are kept in good spirits by it. Short vocal and physical exercises, conducted with spirit, produce the same happy effect.

All the appointments of buildings and grounds should not only be neatly kept, but they should be in the best taste. Such a building and grounds will go very far towards making good teachers of Normal pupils. Add to these a form of discipline which simply requires them always to be ladies and gentlemen, and good class-work will surely follow. The educating effect of tastefully laid-out and well-kept grounds is much underestimated; or, if understood, is sadly neglected. Like mills at a beautiful waterfall, pupils will convert the beautiful things around them into patient, fruitful industry.

The courses of study in most Normal Schools are short and elementary. The graduates occupy middle ground between the younger teachers in the district schools and the graduates of academies and colleges who are principals of high and grammar schools. With a few exceptions this is unavoidably the case; and the graduates should be furnished with a guide to a course of reading and study, to be rewarded by increased honors at Alma Mater. All teachers have more or less time for study. They only want some definite mark to aim at. Upon graduation, let them be shown how and what to study in the line of their profession, and also in the field of knowledge to which they are especially attracted.

As an outcome of the reading circle let a list of standard books be made, from which they are to choose in purchasing. Few articles are bought more at random than books. Teachers are as apt to buy trash as anybody,

unless their attention is directed to good books by some one in whose judgment they have confidence. A teacher of experience can make a list of books in ten minutes, larger than most pupils will buy in five years.

Finally, all Normal-School pupils should be led to study human nature carefully and accurately. In their practice teaching they should be required to present abstracts of the classes they teach, giving the disposition and mode of treatment of each pupil. This should be a special feature of their work, for the reason, that their success depends largely upon it. In teaching them, also they should be made to feel that their own characters and dispositions are thoroughly studied, and that they are treated accordingly. By these methods, combined with the systematic study of Psychology, they may be put in the way of becoming students of men, as well as of books and of nature.

Adjourned.

Third Day's Proceedings.

WEDNESDAY, JULY 12th, 1876.

The Normal Department was called to order by President BROOKS, at 11:30 A. M.

J. W. DICKINSON, Principal of State Normal School, Westfield, Mass., presented a paper on Methods of Professional Training in Normal Schools.

[This paper has not been received.—*Printer.*]

The paper was briefly discussed by Messrs. C. C. ROUNDS, of Me., BELLOWS, of Michigan, and Pres. Brooks.

A paper was presented by H. B. BUCKHAM, Principal of State Normal School, Buffalo, N. Y., on

PERSONAL AND ACQUIRED GIFTS OF TEACHING.

Three factors enter into the composition of the ideal teacher; choice personal endowments, skilful training and painstaking experience. Our schools will be perfect on this side when the teaching craft is made up of the very best *personnel*, is carefully prepared for the school-room, and conscientiously reduces the wisest theory and devotes the choicest gifts to the daily work of instruction in such a way as to make each day's work more skilful and more fruitful than the last. It will remain imperfect so long as unsorted multitudes come into it as into a mere trade, seeking in it employment with the minimum of qualification and abandoning it for whatever more tempting offer may come first.

The teacher carries into his school his native endowment of talent or genius, or the want of either, his bias of character, his spiritual tone and temper, all those indefinable elements which make the difference between person and person; he carries with him, also, the formulas or methods which direct and limit his business, the results of his own observation or the authoritative precepts imparted to him, and the knowledge he has acquired, as the material and the instruments of the work he is to do. These last he uses, in the way and with the result which the first will determine, in acquiring that peculiar and perfected power which can never come to any without experience, and which experience itself can never bring to some. As all agree in their estimate of the importance, the *necessity* of this, whether as tentative or final test of power, or as means of still larger growth and of still greater usefulness, this discussion may be confined to a comparison of personal gifts with what preparatory schools and training of any kind can do toward giving the power of teaching. The first may represent the antecedent, the "pre-eminent" gifts out of which, as from a germ, power is to grow, or upon which, as a basis, it is to be founded; the second may represent whatever is acquired or taken on for the sake of professional use, and is directed to professional ends. The first are personal, attributes of the *man*, marks of individuality—to be impressed on whatever work he undertakes; the second are professional, not attributes, but the particular modes in which these express themselves. In the one, the person stands revealed; in the other, the person becomes preacher, or advocate, or merchant, or teacher.

I call attention, first, to the truth, that the concurrence of personal gifts and of prescribed acquisitions is necessary to any profitable experience. Acquisitions are open to most who will pay the cost of time and labor they may demand; power to use them with comfort to themselves and with advantage to others is denied to, or at least withheld from, many. This is the very simple explanation of failures in every calling; the calling is mistaken, because these two do not agree in directing the inquirer into it, or because the opportunity of doing what the two unite in urging is wanting. Do my native endowments developed by preliminary education and trial commission me for this work? Do my attainments grasp all the special demands of it and so date and countersign the commission? He in whom these two unite brings unfailing power to his work, and all the rest halt and blunder by so much as they lack of either. One may be in point of knowledge and of any qualification which rules may prescribe or examinations may detect entirely competent, and may yet make a certain and hopeless failure from the beginning. For example, Greek, Hebrew, theology, ability to write, may abound in a clergyman unfit for either pulpit or parish. One may know the *omne scibile* of physiology, pathology, and materia medica, whom we would not trust to prescribe for a common cold or an incipient fever. Carefully as they are selected, severely as they are tried and often as they are sifted, not all the graduates of West Point would ever make competent generals of brigade or division, and one able to conduct a campaign is rarely found and only by the loss of many lives sacrificed in the search. More notably still, one may be a fine scholar, of large and liberal culture, exact in all the learning of his

department, and yet be a most miserable teacher. I had almost said the more miserable for all his excess of wisdom beyond a certain point. Learning will sometimes overbalance every personal disadvantage, but in whatever form instruction may come to us we need for its best effect something besides learning. Those, who in any calling designed to influence men, can hold their own simply by the vastness of their acquisitions, are exceptions, perhaps anomalies, not examples. We have all been surprised at the stupidity and feebleness of teaching, both in the district school and the college, of some who are amply furnished with knowledge; and we have been equally surprised at the apparently skilful, interested and interesting, teaching of those whom we knew to be very inferior scholars. It was not so much that these latter used better methods, for their profitable use certainly demands intelligence and knowledge; nor that the former used no "methods," for learning, if it is at all in earnest to communicate itself and to influence men, will find or invent methods of instruction; it was simply that the one did, and the other did not, put themselves into, and use themselves in, their teaching; the one way was outward, formal, hide-bound, irksome to both giver and receiver; the other way was from within, animated by the personality and kindled by the fervor of the teacher. And so, though the hopper of the first was full and the dull sound of the slow and toilsome grinding might go on ceaselessly; and though the hopper of the second might have little in it and the lively music of its present grinding might soon give place to the meaningless rattle of an empty mill, they would both confirm the opinion that what each wanted was just what the other had.

To neither of these can practice, however extended, bring accession of power to teach. The learned book-worm or automaton knows how to secrete; but how to give without loss, or to scatter without wasting, or to inspire without enthusiasm, or sympathize without sympathy, he has not discovered, though he would give much to learn. The other expends freely all he has and makes the most of it; and having done this, all that remains is to do it over again, and every repetition wears it thinner and thinner, till at length it expires by limitation.

To grow through experience one needs to be continually acquiring and as continually using, and not so much using in formulated methods as expending through personal channels. We can never know too much, unless it be in the direction which the Duke of Wellington indicated when he criticized some of his officers as too highly educated for their intellects; that is, unless we have too much technical knowledge for the man that is in us to handle with advantage; unless, to bring the illustration to our own business, we make our schools mere gymnasia for the useless display of our real learning on the one hand, or mere gymnasia for excessive drill in prescribed regulations in which teacher and pupil are alike in danger of becoming machines only, on the other hand, there being no chance in either for the play of personal forces. That expenditure may contribute to power we must certainly have material, and plenty of it, and of the kind employed in the business; but it must be our own, bone of our bone and flesh of our flesh, with our own substance incorporate, and when we give it forth it must be with our stamp upon it and it must be accompan-

ied with our vitalizing energy, that it may first to ourselves and then to others be a "tongue of flame," purifying and kindling whomsoever it touches. We ourselves must be in it, not so much in the form of what is called tact, for that often means only a petty device or a trick of concealment, or a pretense which does not know when it ought to blush; nor in the form of what is called magnetism, for that term, too, is degenerating and may already mean either storming fury and clang of untempered armor and roar and bursting of wooden guns, or gush and slobber which do not start from the brain nor reach the heart of those who have any other organ; nor yet in the form of method, if that means the imitation, or adoption, of the precise way in which others work, or any confinement to channels of intercourse between mind and mind already made; we ourselves must be in it with large infusion of our personality, of our character, of our life. If acquirements are wanting, we shall be without resources to work upon; if ourselves are wanting, we shall have no resources to work with. In either case, the harder we work, the more barren the result; in either case, we are like men on a tread-mill; incessant toil and no progress, weariness without reward, labor without encouragement or hope; these are the only results, and the worst of it is they infect teacher and pupil alike with a mental and spiritual death from which there is no prophecy of future resurrection.

On the basis, then, that these two factors are necessary functions of all profitable experience, without which in its turn there can be no substantial test of merit and no available condition of growth. I proceed to state briefly what these elements of power are and to discuss their relative value, premising that the two dove-tail into each other and act on each other throughout their whole extent.

I include under what I have called acquired gifts these three: the requisite knowledge of subjects to be taught, the requisite knowledge of methods of instruction, and familiarity with school organization and routine. All these the teacher, as teacher, must know. They are, or should be, the subjects of his examination. If he is seriously deficient in any one of them, his license should be refused. In other places he would not need and could not use them; in school he cannot do without all of them. They are to him what a knowledge of law, acquaintance with decisions and precedents and the code of procedure, are to the advocate or the judge. They are what a knowledge of military tactics and discipline are to the officer in the army. They are the professional outfit, in distinction from the personal qualifications of the *man* who enters the profession. I must know *what* I am to teach; I must know *how* it is best taught; I must know into what form, and into what regulations my school must be put in order to its best condition as a school. So far as I know these thoroughly and do these well, I am a good teacher. I could not pretend to "keep school" for a day without them. And in these, if other qualifications agree thereto, one may attain great excellence and skill and power. Whatever other qualifications coexist, great results cannot be obtained without superiority in these. In the use of them great improvement and progress may be made, and they are always and very properly one measure, perhaps the generally if not the only recognized measure of a teacher's merit. The

school officer and the school visitor judge by them, and the teacher compares himself with other teachers by this standard. In order to these Normal Schools and teachers' classes and institutes are maintained, and on them licenses are granted. They are the formal conditions of success, not to be dispensed with or neglected; they are the constant conditions, also, needful in the beginning of a teacher's career, and through all its course. They are even more than this; knowledge and method, organization and plan, are the necessary channels by which all higher forces come into our work; they are the proximate agents by which that work is directly done; their direction, their manner, to a certain extent their results, may be prearranged and depended on. They may be reduced to a system and may be imparted by instruction, purposely adopted and consciously received as explicit means to a definite end. Still further, the knowledge required and the general principles of method and of routine are essentially the same for all in similar circumstances, and they can be adapted to all circumstances. In short, they are the stock in trade, which is to be used to produce desired results. By means of them the teacher reaches and influences the pupil; they are to his teaching power what one's words are to his thoughts, or what color and canvas and brush are to his ideals, the instruments of expression; without them he can do nothing. All this is claimed and conceded to be the province of professional, or acquired, gifts.

But we have as yet only half a teacher, and, if I may use the expression, neither the *first* nor the *larger* half. There yet remains all that makes the difference—and what a difference it is—between a teacher, and a man or woman, teaching; all for which often recommendations and correspondence have made a favorable impression. You desire a personal interview before making an engagement; all the complement of your estimate which comes from judging what impression one will make, what and what sort of influence he will exert, what power he will bring to the work he is to do; all that is meant when one says to us, "half an hour's talk will do more to settle my estimate of your ability and fitness than anything else can do;" all, that is, which is not professional, but personal. For it is the man in the teacher, that teaches; it is the personality of him who asks the questions and uses the crayon, and not the technical training, that gives power to stimulate and guide. It is the authority which resides in the man or woman, and not that which has its only expression in rod or rule, in license or diploma, that persuades or compels obedience. It is what one has over and above his class standing, beyond his knowledge of formulated methods, outside of his ability as drill-master and law-maker; it is his appearance, his manner, his spirit, his character, which determine fitness to use knowledge for the instruction of others and to be their guide and pattern. All the education and training possible cannot make a teacher out of an unclothed skeleton, or a tomb-deposited mummy, or any coarse-grained living creature. A silk purse cannot be made out of any thing but silk. It is a wicked waste of time and labor to put the ordinary boy or girl who does not want to work on a farm or in the house, or *anywhere*, into a training school for teachers, as you would put them into a carpenter's or milliner's shop to learn a trade. As in a trade he is not a

good workman who has simply muscular strength, but he whose mechanical skill controls and directs his muscular strength, so in the school he only is a good teacher whose personal qualities direct and inspire his professional abilities. Take the man out of the teacher, and you have a formula, a machine; take out the living, inquiring, sympathizing spirit, and you have left only an interrogation point and a guide-post; nay more, take out the personal qualities and leave only the professional qualifications, and you have but a dead, blind force by which to bring living children up to manhood's powers and duties; and *the resistance to be overcome responds to no such power.*

What are these personal gifts? They are, partly, of the body; good quality of voice; manly or womanly carriage; that degree, at least, of grace of movement which comes from activity and never suggests awkwardness either now manifest or just departing; that pleasant expression of features which betokens at least good health and good habits; cleanliness of person, too, and conscientious attention to it. Feebleness, deformity, a hyper-lymphatic temperament, and poor health, should be excluded from the school-room by a law that knows no relaxing or evasion. All the *physical* influences in which children are educated should be full of health and vigor.

They are, partly, of the mind: clear and sharp intellect, good faculties and well balanced, quick perceptions, readiness to understand, ability to make simple and clear statements. Dull, confused intellects, minds never fully awakened out of their first sleep, indolent perception, imperfect reasoning and inadequate statements, are no where greater misfortunes and no where greater stumbling-blocks than in the school-room.

They are, partly, moral: a simple love of truth, a receptive attitude toward it in whatever form it comes; a reverence for that is good, and a conscience void of offence toward God and man; a sense of obligation giving character and sanction to all words spoken and all deeds done, the consequent absence of frivolity and trifling, and the presence and power of an honest and definite purpose in life; these are needed to give purity and steadfastness and elevation to all efforts of teaching.

They are, partly, æsthetic: an eye to detect and commend to observation and imitation whatever is proper, refined, or beautiful; an eye to detect and condemn whatever obtrudes itself of coarseness or vulgarity or ugliness; the taste and refinement which, expressed and enforced in a hundred unconscious tokens, produce their like in all under their authority.

They are, partly, of the disposition: the cheerfulness which is disposed to be happy; the perseverance which knows no halting till the end is reached; the resolution which never doubts of success, as it never fails in strong convictions; the courage which dares to do right; the patience that tries every resource without wearying or fretting; and the sympathy that understands and feels, pities and excuses, or pities and condemns.

They are, partly, of the nature of habits, acquired indeed, but belonging, not to the business so much as to the *person*; punctuality, order, method, *the use of good English*, the right and diligent use of time, due restraint of the tongue, courtesy of manner and speech, proper companionships and associations.

They also run into the professional gifts in that eagerness and passion for teaching, in that aptness to seize and use whatever comes in its way; which, if it be not genius, is near of kin to it.

Is this a formidable list of gifts to be demanded of only the dozen best and highest? Will a little technical knowledge do without this additional and preliminary outfit? Will you commission to do *this* work those who are fit for nothing else, the intellectual dunces, and the moral ciphers, and the physical drones? Will you spare good health, good manners, good taste, or that subtle combination of manly or womanly qualities which fit to command, and make "apt to teach," and attract and inspire and control children, from the common teacher of the common school? Will you exchange the form for the life, the routine for the power, the book-knowledge for the example, the man as such for the workman as such, in a business like this? For my part, if I could not have both, I would omit some of the professional gifts if I could be sure of the personal ones in effective measure; and this not because I should undervalue these, but because they can much more easily be supplied than those, which come not by any set lessons nor when wanted for any special use, but by gift of nature and made ready by culture for special use in whatever work their possessor may do. They may, indeed they must, be cultivated and strengthened, but so far as their ground-work is concerned, and their importance, and their vitalizing power in the use of any technical or professional instruments, must we not say *magister nascitur, non fit?* I find here the spring and secret of the teacher's power; here, in the personal qualifications, in the inherited or developed characteristics of the individual, in the *manhood* that underlies and actuates and determines both the measure and the degree and the kind of ability which any can acquire. I find here the proofs of a call to teach and the prophecy of success in teaching. I claim that none are rightly teachers without this "fore-ordination."

Go into the ordinary district or graded school—and include the higher institutions, if you please—and observe what is called the "average teacher." You will find her—I change the pronoun to include the majority of teachers, though I do not at all mean to exclude the other sex—you will find her intellectual attainments not high, though she has passed examination and could do so again; and what is worse, she considers them high enough for the place and would resent any attempt to raise the standard. If required to do so, she would prepare herself to come up to a higher standard, and when it is reached she would rest there, as she rests now where she is. It is to her the regulation of a business she would follow for a little time; it is in her thought a serious personal charge against the school officer that he is too particular and exacting, more so than others are or than he needs to be. All that the law actually requires, as that law is interpreted and administered by the proper officer, is here. The teacher means well, "tries hard," works faithfully according to prescribed regulations, and "keeps a legal school." But for the "average teacher," what is there beyond this? what *call* beyond necessity to earn a living? what *ordination*, beyond the bargain with the trustee? what "letters patent" beyond the license beginning, "this may certify"? and what result besides a result like the qualifications? indeed, what other

result is possible? A city superintendent tells me that he has seven hundred applications for places, and perhaps twenty-five places to be filled every year. I can only wonder whether even legal requirements are made a condition of candidacy; if not, the number might as well be, as it could easily be made, seven thousand; I should very much wonder if, with either number, there were fifty *fit persons*, properly qualified, named in the list.

Morals. 1. There are too many wholly unfit persons employed in teaching; a crowd of unendowed, unqualified, *uncalled* and half-educated persons are doing the highest and most influential work done on the earth; there are far too many intellectual and personal *Philistines* in our camp.

2. This in the form of a query. Are the Normal Schools, without meaning it and not being blamable for it, by offering privileges too freely and by attempting to make teachers of all who offer themselves, elevating or lowering the standard of the craft, tending to make teaching a *trade* or a *profession*, doing most for the improvement of schools or for the advancement of individuals?

The following paper by JOHN OGDEN, Principal of the Ohio Central Normal School, was not read in consequence of Mr. OGDEN'S absence. The paper had, however, been forwarded for reading:

"A PROFESSIONAL COURSE OF STUDY FOR NORMAL SCHOOLS."

In a paper on "What Constitutes a Consistent Course of Study for Normal Schools," read before this body at Detroit, Michigan, two years ago, it was claimed, 1. That a *Professional Course* was both necessary and practicable.

2. That the Academic Course, which a want of an adequate knowledge of the common branches of education, makes necessary, should be subordinated to the professional, and used largely as illustrative of methods of teaching.

3. That the whole doctrine of man's growth and education can be formulated and studied, both as to the susceptibility and kind of development, and as to the laws governing the order and degree of such development.

4. That the whole range of the sciences, so far as they have been developed, can, in like manner, be studied as to educational values, and arranged in the general order of the growth of the faculties.

5. That the art of thus adjusting knowledge and employments, to the actual wants of the human mind and body, in all their possible relations and stages of growth, constitutes the real doctrine of methods.

6. That unless there is this thorough understanding of man and his wants, on the one hand, and of knowledge and its educational value, on the other, there is a constant liability, nay, an evident tendency to make mistakes.

7. That methods are themselves worthless in the degree that they do not conform to the fixed laws of physical, intellectual, and moral growth.

8. That a knowledge of these should antecede all practice in teaching.

Without repeating any of the arguments used on that occasion, it will be sufficient to say that in the abovenamed topics, and the extensive field of inquiry suggested by them, lies much of what can be most conveniently arranged into a course of purely professional study and practice for Normal Schools.

If it does not lie in this field, I am sure I do not know where to look for it. This source can not, certainly, be objected to on account of scarcity of material; for the contemplation of it, on the one hand, sweeps the entire cycle of human knowledge, physical and metaphysical, as a necessary means of properly understanding man and his relations; and on the other, the whole field of art, employments and language, in order to make proper applications, or the right adjustment of supply as found in knowledge, etc., to existing want, as found in man.

This professional preparation surely does not lie in the mere study of the different branches of science, *as such.* Were this the case, Normal Schools could at once be dispensed with. They would be not only useless, but an actual imposition; for surely this work of preparation, if it consist in nothing more than thoroughness in academic learning, can be more conveniently and cheaply obtained in the common school and the college. But if it be claimed that Normal Schools have a different way of imparting instruction, suggestive of the best methods of teaching, etc., I reply that this is both begging the question, and assuming a most untenable position; for were it the case that the branches of learning *are* thus taught, it is just what a purely professional course, by a study of man and his surroundings, proposes to do, not blindly, as is apt to be the case in the quasi normal school; but to do it intelligently, and to a purpose, having studied the conditions beforehand. And that the branches can be studied more thoroughly in a normal school, is by no means a necessary thing; indeed it can be shown that the normal school can not, or does not do as thorough academic work as the common school and the college. This arises, usually, from a want of sufficient time. To this rule there may be exceptions. A Normal School with a twelve years' course would certainly be one.

I therefore conclude that if help come to us at all, in this unsettled state of our professional knowledge, it must come from the quarter indicated in the foregoing. But that one man, however learned or wise, is capable of evoking such help and marshalling it in order before the army of normal-school men (and the writer can remember when the number was small and feeble) is quite another thing. We have heretofore claimed that it required the combined wisdom and experience of the entire teaching profession; and that early measures should be adopted, to collate a professional code, and to place it in such a light before the profession, that we might have, not only the required curriculum of knowledge, but the prestige of authority also: and that the young Practitioner might, as in other professions, learn his business before he commences his practice.

And I here renew this proposition (being present in spirit, though ab-

sent in body), to wit: that a college of educators be appointed by this body, for the purpose of codifying our laws, if we have any, and reporting the same at some future meeting for the purpose of ratifying said code or course of study, if that be its name. In the absence of such a codification, and the authority derived therefrom, I suggest the following subject, of course to the inspection of this convention of teachers, hoping it may, at least, incite inquiry into this much needed reform in our professional work.

Proceeding upon the supposition that the student-teacher is well versed in a knowledge of the branches of a common-school or collegiate education, according as he is striving for a certificate for a high or low grade of school, the first four or six months of the professional course should be devoted to a careful study or review of physical science, including comparative Anatomy and Physiology, Botany, Natural History and Geology. This study should be accompanied as far as practicable by experiments and illustrations, both with plants and animals, until a respectable acquaintance with the laws of life and growth is acquired. Thus the whole field of nature might be surveyed, mapped out, and laid under tribute to the child's wants, in language lessons and object teaching.

This doctrine proceeds upon a principle as fixed and constant as the laws of the universe, viz: *nature first and books afterwards.* Reading, orthography, and writing are best taught through nature, not nature through the dim and obscure media of the printed page. The same is true of numbers and language, and the whole range of child knowledge. Thus taught, the time will all the sooner come when books and guides in this research will be craved by childhood and youth, as they crave their natural food, because a healthy appetite has been engendered. But in the old regime, the book seeks the boy, and not the boy the book.

Dear teachers, when shall we learn wisdom? Even when we "become as little children."

These studies and exercises should be accompanied by a similar course in Psychology or mental and moral science, including the nature, growth, and development of the faculties, both of mind and body, commencing with early infancy, and following the steps or stages of growth through all the periods of human existence.

I think mental science is best taught in connection with Anatomy and Physiology—the mind in connection with the organism through which it works. The advantages of this course are very great. We can not detail them here.

A variety of text-books may be used; but I know of no one book as useful as Dr. Carpenter's "Mental Physiology," published by D. Appleton & Co., N. Y. It deals in facts alone, and leaves us free to form our own theories. But a large part of this work must be done by lectures, experiments, observations, and independent lessons in nature's school.

No one need be told how important this course is, or how interesting it becomes when pursued in a professional way, *i. e.*, with a view of making it available in developing and training latent or untamed human energies into habits of order, neatness and productive skill.

This course should be associated with what it really implies, to wit: a similar review or comprehensive study of all the ordinary branches of

learning, with a view, not only of ascertaining their respective educational values, but of their classification—according to such values—into courses of study, suited to the various grades of schools. This also would prove a fruitful theme for thought and speculation; for not only will new beauties and adaptations reveal themselves, but it will be found, on a careful comparison of mental want and the nature and amount of the ordinary supply, that the disparity is fearful.

Much that is now regarded as excellent in our educational curricula, will be found not only worthless, but out of place and hurtful.

Many things, particularly in our primary schools should be deferred or dropped entirely, and many things now excluded, should be introduced. In fact it will suggest, and probably secure, in time, an entire revision of our popular courses of study, from the lowest to the highest grades. And I trust I may be pardoned for saying just here, there is no department in the entire range of human invention or activity, that needs reforming more than said courses of study, especially as to order and arrangement of branches and methods of teaching them. They seem to be gotten up in the interest of some monopoly or patent right, without consulting the nature and wants of childhood and youth. Indeed they suggest the "procrustean bedstead," for the child must, forsooth, be trimmed and fitted to the course, instead of the course to the child.

This might seem like an unwarrantable charge against the popular will, as expressed in these courses, and their practice, as expressed in their actual operations. But, in the language of some of our respected congressmen, "I am responsible for it;" and stand ready to make good my assertions.

But to return; this classification need not end with a carefully-prepared list of sciences, as such; but it may enter into each one individually, arranging its facts and principles in such logical and chronological order, as respects their relation to our faculties, that learning shall become a perpetual delight, instead of the torture and drudgery it now is, in too many instances. In fact, no one should be considered competent to teach, that can not thus plan and execute an entire course of study for any grade to which he may be aspiring. This task is not so difficult as some might suppose. It is much easier in fact, than many other things of far less importance that we require of teachers—easier because it is more rational. Indeed it becomes a necessity in any well-ordered course of Professional study.

The student is now supposed to have spent one year in the above preparatory work. This time can be prolonged or shortened according to the proficiency of the student, and the *degree* of proficiency required. More frequently it should be prolonged; for the field of inquiry is infinite, and as interesting as it is extended. The true teacher will linger about it always; ever adding fresh supplies to his professional stock, ever renewing his wasted strength, ever imbibing fresh delight; for the source is as inexhaustible as the fountain of Divine Wisdom itself.

But closely allied to this branch or rather these two branches of our subject, viz:—the study of man, as to his possibilities, and knowledge as to its adaptability—*is the study and practice of methods.* This much abused

subject I commend to my fellow-teachers as one too delicate to be handled here, or at least, too complicated. It is one for which no rules can be prescribed; and it needs none, since methods are the product of individual knowledge and aptitudes. True methods are seldom superimposed; they are self-evolved, and arise largely from our acquaintance with human nature and its needs, and from a knowledge of the educational values of the several departments of science, combined with skill to use force, in a forceful way.

Knowledge is a sharp razor. Its skilful use may accomplish great good, may accomplish wonders; but in the hands of the unskilled and awkward, or the designedly vicious, it becomes an instrument of evil, an instrument of destruction, destruction to its possessor, and to those to whom he would communicate it.

Hence methods, as deduced from the laws of growth and the means of promoting it, should occupy another six months or a year, in the normal school. This is best secured in connection with the "Model," or "School of Practice." This "Model" is indispensable to an adequate course of professional training. The most learned and erudite may fail for want of ability to use knowledge skilfully, whether of an academic or a professional character. A full course of practice, therefore, should supplement that portion of the professional course relating exclusively to the philosophy of learning, and the laws of growth. This practice should relate not only to hearing recitations and the management of class-work, but it should include the organization of schools and classes, the assigning of lessons, the use of incentives to study, and, in fact, the whole subject of school management.

Some of the professional text-books I use for the first six months or a year, in connection with lectures and general reading, are: *Quick's Educational Reformers*, *Wickersham's School Economy*, *Hailman's Lectures on Pedagogy*, and *Page's Theory and Practice of Teaching.*

In the second year—more or less—*Wickersham's Methods*, *Hart in the School Room*, *Phelps's Hand-Book*, and "*The Science of Education and Art of Teaching.*"

These books, and kindred ones, I use much after the same fashion of using other text-books, assigning topics, and requiring the student to collect facts and principles, out of which we construct a course of courses adapted to the several grades of school, which may be under consideration. A synopsis of these, together with the lectures and independent essons, I require to be written out by the pupil-teacher; so that he may carry away with him a text-book of his own construction, and adapted to his particular needs.

The chief obstacle in this course is the want of time to become thorough, few pupils remaining longer than a year, or a year and a half in the Normal School; and a part of this time is necessarily devoted to the actual study of branches—mostly the higher, however—so that a compromise, as expressed in the beginning of this paper, has to be made between the purely professional and the academic.

But a course of study for the present either professional or academic, must be different from that of a hundred or even fifty years ago; both

because of the illogical arrangement and inefficiency of these ancient courses, and also because of the increased demands made upon the present age.

While human nature may be regarded as a fixed quantity, in all ages of the world, nevertheless, history reveals the fact, that there are constantly developing new conditions and aspects in the world of thought, experiment, discovery, and invention. These changes in man's outward relations, call for the readjustment of the "ancient landmarks," the rearrangement of the old forces to these new relations. "The new wine does not agree with the old bottles." There is an infinite progress possible in man's education—in his intellectual and moral condition. Shall we ignore this while starting him in this course, and conducting him along the mere human paths of this progress? Do we not hinder the world's advancement by this temporizing policy—this attempt to reconcile the old with the new, the false with the true?

Again: that course of study that does not make a provision for the continuance of a line of study and practice in the life-work of the student, is radically defective. It should not only beget an appetite for future study and progress, but it should indicate the food both as to kind and quantity. Many persons starve intellectually, for want of incentives to study, and suitable directions after leaving school. The reception of a diploma, with them, is the end to all study. This not only reflects discredit upon the *course of study*, but upon the manner in which it has been completed.

A course of study should, in the first place, contain the elements of a life-work; and, in the second place, its pursuit should symbolize the actualities and activities of such a work. It should lead the student to the border land of life's realities, as the popular term "Commencement" would seem to imply, and there, after his having acquired such skill, energy, and force, by contact with its problems, its toils, its handiwork (for I would have a course include handicraft also) commit him, fully prepared to contend with life's sterner problems, to a class of agencies, calculated to give the largest and freest scope to all his faculties, in subsequent life.

All professional diplomas should, therefore, be both *retrospective* and *prospective*—retrospective in grade, as to past proficiency, and prospective in their provisions for future study and practice. The continuance of their validity should be conditioned upon future fidelity and progress. The teacher should report annually to his "Alma Mater," and the diploma should be subject to renewal, or such alterations as the circumstances might warrant. It should also contain an index of future work, and in case of a failure in the fulfilment of its conditions, its revocation should be made as public as its presentation.

This is especially necessary in a professional course. It would act as a monitor, and a stimulant to progress, thus preventing many shameful violations of the obligations imposed by graduation. A blank, such as the following, might be serviceable. It should be forwarded annually to each alumnus, the blanks to be filled and returned to the faculty before the annual examinations and commencements, as a basis or criterion, from

which to determine the promotion or demotion in degrees or grades of the holder. And in as much as real progress demands that the acquisition of knowledge and ability to use it professionally, should go hand in hand, the academic studies should appear upon the blank in the same connection with the professional. The following might serve as a sample:

Academic.

What studies in the following list have you been pursuing since last report?

I. Mathematics.	Arithmetic	Book		Extent	
	Algebra	"		"	
	Geometry	"		"	
	Trigonometry	"		"	
	Astronomy	"		"	
II. Nat. Science.	Geography	Book		Extent	
	Geology	"		"	
	Botany	"		"	
	Zoology	"		"	
	Physiology	"		"	
	Physics	"		"	
III. Language.	English { Grammar,	Book		Extent	
	English { Rhetoric, etc.	"		"	
	German	"		"	
	Latin	"		"	
	Greek	"		"	
	French	"		"	
IV. History and Philosophy.	U. States	Book		Extent	
	General	"		"	
	Literature { English,	"		"	
	Literature { American,	"		"	
	Psychology	"		"	
	Logic	"		"	

Other studies can be added to this list if desirable.

Professional.

1. What works on teaching have you studied since last report?
2. What Educational periodicals do you take?
3. What lectures or educational articles have you written or published?
4. What Teachers' Institutes have you attended? In what capacity?
5. How many months have you taught?
6. What Place.....Grade.....Salary.....
7. What other Educational work have you done?

Fellow-teachers: the foregoing is submitted as merely suggestive of what we believe *can* be done, and *ought* to be done, in this particular field of our work.

Let us either cease proclaiming to the world that ours is a profession, or else do something to entitle it to such a rank. Let us do something in the way of collecting and classifying the material about us, into a system of knowledge susceptible of study and practice, in the Normal School; that those coming after us may not be compelled to wade through words interminable and discussions endless in order to obtain a few settled ideas upon their work.

Let us put our Normal-School Literature, and our courses of instruction in shape, and *do it now.*

Let us have something like uniformity in these courses, and the future members of our profession will have cause to bless the National Educational Association on this the Centennial year of our Nation's birth.

ELEMENTARY DEPARTMENT.

First Day's Proceedings.

MONDAY, JULY 10, 1876.

This Department was called together in the Main Hall of the Academy of Music at 3 P. M., by the President, Mrs. STONE. In the absence of the Secretary, Mr. Z. RICHARDS of Washington, D. C., was chosen to fill the place *pro tem.*

The President announced that the Hon. B. G. NORTHROP, who was to read the first paper, had just informed her by telegraph that his health would not permit him to be present.

Mrs. JOHN KRAUS-BOELTE then read the following paper:

CHARACTERISTICS OF FROEBEL'S METHOD, KINDERGARTEN TRAINING.

The Pre-requisites of a Kindergärtner and Explanations with Illustrations of the different gifts and means of occupation in the Kindergarten.

The characteristic of Froebel's method consists just in his methods of occupying children, by permitting them to bring forth a product by their own feeble efforts. These methods awaken and develop the germs of the creative spirit, the spirit of invention, and, instead of allowing the child to imitate, lead him to produce individual work. A real fusion of learning, work and play is only possible, when the objects, which serve the child in its play, are not *ready made,* but invite independent mental and bodily action upon them. Ready-made playthings hinder childish activity, and train to laziness and thoughtlessness; and hence are much more injurious than can be expressed. The impulse to activity then turns to destruction of the ready-made things and becomes at last a real spirit of destructiveness. Also merely mechanical work of the children, that which is done without exciting the imaginative faculties, is likewise injurious, because thereby the intellect becomes inactive. Froebel's method aims to give nothing but the material for play. The transforming of this material, wherein play and work consists, is done *according to law* in a free, inventive, productive manner. "Just there," says Bertha von Marenholtz, "where the critic commonly attacks the Kindergarten, lies its highest value." It is thought by some, that Froebel gives to all children the same materials, prepared beforehand, so that they may make use of them; and that he obliges them to draw from these materials determined and foreseen results.

But this would trammel all individuality. We do observe in some quarters a disposition to make patterns and prepare elaborate material for the Kindergarten; but this is a deviation which annuls Froebel's principles. His method is the very opposite. The child receives only simple material, which he can transform, or compose into new forms within the limits of their nature. The important thing is, that the teacher should be thoroughly imbued with Froebel's principle. The individuality of children is neither constrained nor fettered whether Kindergärtner knows how to lead him to appropriative use of materials suitable to his purpose. Nothing is more difficult to set forth in Froebel's method, nor more important to be comprehended, than the application to children's plays of the most general law of creation. But it is absolutely necessary to see how this application is made by the children, in order to appreciate the value of the method." Under the head: "*What is required of the Kindergärtner,*" (compare Report of the Com. of Education of 1872 in an article on "*The Object of the Kindergarten,*" by John Kraus) it will be seen, "that the most essential part of the whole system is the methodical arrangement of the exercises and the games, and the explanations given by Froebel to those who are to conduct them. To know them all is quite a study; to apply them well, an art; to understand their significance—their effect—the order and manner in which they ought to be given to the children, is a science. It cannot be too often repeated, that nothing but long and careful study of the system *and* actual working, will give *such* knowledge of details as would enable a person to practice the peculiar mode of instruction, or to understand the many important points, such as the length of time to be given to each exercise, or which of these may be used simultaneously.

"That it is necessary to begin every art, every trade, and in short all kinds of handiwork with the elements of all knowledge, every one knows. But what the elements of all knowledge—what the elements of all work are—that every one does not know. What has been said by Pestalozzi and Froebel on this subject and repeatedly commented upon at length by Diesterweg, Bertha von Marenholtz has drawn into a small compass." In order to learn to read, one must first learn the A. B. C. To be able to work productively, one must learn the A. B. C. of matter, and also the A. B. C. of things, since all things are of material nature. But this A. B. C. of things consists in their common properties, for example: form, color, size, number, sound, etc. Whether we mean artistic or industrial work, it always has to do with *form*, color, dimension, etc., and these organs must be carefully developed and exercised therefore, if the work is to succeed. *Before* object-teaching in the school undertakes this practice, things and their properties have been perceived by the young denizens of earth,—perceived as an impression not understood. But this merely indefinite perception does not yet give the A. B. C. of things clearly and definitely ordered any more than looking at books teaches the child the letters. Now this A. B. C. of things must unquestionably precede the A. B. C. of words, since the sign (the letters) presuppose the concrete to which they refer; this most original of all perceptions, of all understanding and learning, had not yet been found before Froebel. The things

and their properties are certainly there, and they are also perceived by every child of sound senses, but they have not been set in order so as to be irresistibly impressed in their original and simplest elements on the still blank tablet of the child's soul. This discovery, and the clothing of it in the form of play, is Froebel's general thought, and the new and important thing in his method! Only in this way is it possible that the very youngest child by his own labor, that is by self-activity, can himself work out his intellectual powers in their entire individuality; and the only proper nourishment, the milk of his earliest development be administered to the young mind. The material, which the A. B. C. of the properties of things (of all things) represent, are far more easily to be combined for the as yet unpracticed organs of the child, than the letters of words unintelligible to him; the figure and image combined by himself express the soul of the child yet hidden from himself better than words could do it, just as the artist can express his idea, not in words, but only in works of art. But the discovery of such a plastic A. B. C. is not only the beginning, the knowledge, and the mastery of the material, it also brings the free methodical management of every work, by means of which the workman arrives at the comprehension of its theory, and thus only is labor to be raised to science, when it becomes an intellectual and individual product.

Some time ago the graduates of Columbia Law School in the city of New York, some two hundred in number, appeared before the General Term of the Supreme Court to be admitted to practice under the Statute. Judge Davis, who presided, took occasion to say, "that he disapproved of the manufacturing of lawyers." While he thought it proper to examine the gentlemen before him in regard to character, he intended to instruct the committee to adhere to the admission of graduates from law schools, and although the committee were obliged to examine as to their character, and the court to admit them to practice, there were other requirements than the mere passing of the examination at a Law School. Similar it is in regard to Medical and Normal Schools. Says Dr. H. C. Wood in regard to the medical education in the United States: "There may be in the community a wide diversity of opinion as to the power of the medical profession for good, but there certainly must be a great unanimity as to its power for evil. What may be called the medical instinct of the race is so strong that in times of serious illness the most inveterate scoffer is fain to call upon the physician. The public has therefore a vital interest in the practical skill of the profession, and, as this skill is chiefly the result of technical education, in the training of young physicians. The methods of education pursued in this country are at present singularly imperfect and the need of some control from without the profession is imperative." Says another: "Our medical schools, law schools, normal schools, and all professional schools, in a measure, fail to meet the expectant demands of the public in sending forth trustworthy physicians, competent lawyers, and teachers of power and influence, mainly because the material upon which they operate is immatured." The Principal of one of the most prominent Normal Schools in this country says: "There are perhaps more quacks to-day in the profession of teaching than in the profession of medi-

cine. The aim of a Normal School is to impart to teachers a professional education, and to enable us to drive out the quacks. The stupidity of the physicians is rarely felt at the time; the blunder of the lawyer may result in financial ruin, but the crudities and ignorance of the teacher may continue *undetected* for *years*. If the man has a pompous exterior and glib tongue, he may deceive boards of school trustees for years. The teacher's work being intangible, and we might add, spiritual, the great mass of mankind cannot estimate it as they do flour, coal, and medicine, etc."

"In America," says Miss Anna C. Brackett, "more than elsewhere, we must expect to find multitudes attempting to do what is beyond their power, and the profession of education, in common with all other spheres, exhibit this fact. The American Normal School, in order that its diploma shall mean anything whatever, has therefore to distinguish between the chaff and the wheat, and then, decidedly and with authority, to separate the one from the other, retaining only the wheat. Unless it does this steadily, without fear or favor, it will be of very little service, however large may be its numbers, because it will simply serve, in that case, to exhibit a natural weakness instead of helping to correct it."

It may be asked: "What has this to do with the training and qualification of Kindergärtners, who have only to deal with little children"?—As the Kindergarten is regarded as the Nursery of Mankind—this fact speaks in itself for the importance that is attached to the true training of the Kindergärtner. It has been well said that "if it were possible, every child shonld be taught by God himself." Every child is taught by a Divine providence that perpetually undoes mischief which our folly and wickedness inflict, and the best recognition we can make of this fact is to place our largest-minded and largest-hearted teachers over our youngest children in the school-room. The teachers of the lowest grades of pupils must be the animating soul of the school-room; must understand the varied avenues of approach to the sacred shrine, the soul of childhood; must inspire with her own enthusiasm and work the powers by which the little ones can apprehend, in gradual process, the mysteries of knowledge." Similarly expresses himself the author of a little pamphlet: The Philosophy of Teaching: "So deeply are we impressed with the importance and utility of the Kindergarten, and with the high qualities required by the teacher of the very young, that we are more and more disposed to believe that the true order in rank and promotion among the teachers should be, to speak in paradox, downwards; that is to say, the younger the children to be taught, the higher the rank and remuneration of the teacher; for not only is an extensive range of knowledge necessary to enable the teacher truthfully to answer the innumerable questions of inquisitive infancy, and to avoid giving false notions, to be afterwards with greater or less difficulty removed—always with a shock to the moral sentiment when the child discovers it has been deceived — but also a knowledge of the infant mind, a perception of the thoughts and fancies which chase one another through the infant brain, a knowledge and perceptive power which only a watchful and loving experience can acquire. An industry and a patience far beyond any needed by the teacher of

more advanced pupils, are required by the highly-cultivated men and women to whom alone the training of infant minds should be intrusted. Advanced pupils go more than half way to meet their teacher—the infant can render no assistance to his, all has to be borne, suffered, and done for him—his future habits depend mainly on those given to him in his earliest years. Yet the care of him in these important days is generally confided to ignorant nurses and to the less skilled class of teachers."

As I said already some years ago before this Association: that "One of the chief causes that Froebel's method mostly has been executed imperfectly, is the *insufficient training of Kindergärtners,*" and I here repeat what we demand of a Kindergärtner, viz: "An indispensable element in the Kindergärtner is, a quick and ready sympathy with the children, but it must be real, genuine, not pretended. She must be a child at heart, must be mother and sister to the children, and feel happy in their company, and have a clear insight into child-nature and life up to the seventh year. The nature of the child's mind is best learned by studying the thing itself. The principles of education cannot be fully mastered, especially in their relation to methods, unless illustrated by their application, and these can be done only where they are practiced. An exact knowledge and spiritual comprehension should be demanded, united with dexterous handling and turning to account as realization of the material; some musical knowledge and ability so as to execute Froebel's songs, and guide the plays with pleasure; a cheerful humor that can easily enter the child's plays, and is not easily affected by childish frowardness; conscientiousness; so much knowledge of nature as to be enabled to show to the children everywhere the Creator's love, wisdom, and power; in short, a pure and perfectly-cultivated mind and character; an idea of enduring results of her labor; a knowledge of the difficulties of her work, an appreciation of the sad consequences of mistakes; and, once more, a warm love for children, a spirit of self-sacrifice for their good, a just estimate of the true dignity of her vocation. Then it will be seen that it requires more tact, more energy, more ingenuity, more skill, more labor on the part of the Kindergärtner, an industry and patience far beyond any needed by the teacher of more advanced pupils. And last, but not least, the Kindergärtner needs true enthusiasm, which is kindled only at the altar of the living heart of little children." The Kindergärtner should also know how the cheerful play of the children should pass over into more serious instruction of the school. What renders children so happy in the Kindergarten is that they learn to play, the only thing that they care for after having supplied their animal wants.

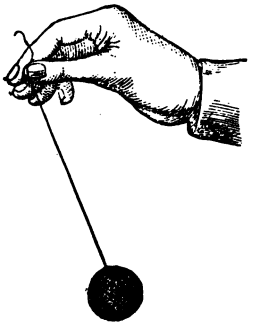
"That which will render pupils as happy in the primary schools is, that they learn to *learn*, the next thing children care for after they have learned to play," and that this latter should be the result of the Kindergarten time; it should be found existing in children at their seventh year." It should further be borne in mind that the aim of the Kindergarten system of training, which is intended for young children up to seven years of age—when school-training *proper* should begin— is to prepare for all subsequent education. But in order that school-teaching *proper* should begin in the right way, the Kindergärtner should know how

the cheerful play of the children should pass over finally into the more serious instruction of the school. This is a point of great significance; so much so, that Diesterweg says, that "if this could not be done, it would be better that we had no Kindergartens." The Kindergärtner is also often asked to give elementary instruction to those children who have passed through the Kindergarten; and if it were only on this account she should be acquainted with the pedagogics of the new elementary methods, and the history of their development, and she also must be taught *how* to teach. Without this knowledge she would be in the dark in regard to instruction, and gross mistakes could easily be made in regard to the school and its institutions. A sufficient insight into school affairs will, besides, make her modest, and she will not judge schools hastily if she acquires a knowledge of the highly-gifted persons who have devoted their lives to its development and continued accomplishment. If we look more minutely at the subject and the method of instruction, we ought to render more prominent the fact that the different branches of instruction have a certain connection with and relation to each other, and have their focus, so to speak, in Froebel. For only through strictly-jointed and united work can we come nearer to the aim of the training of the true Kindergärtner, and can an independent, conscious work be reached—that is, if we can presuppose that the instruction can be called profound and comprehensive.

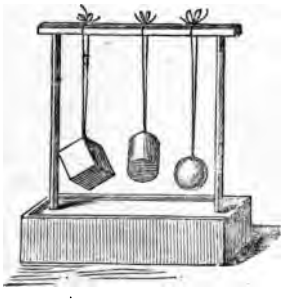
In regard to the different branches of instruction, we require, in pedagogics, complete and exact knowledge of the newer historical pedagogical development, from Amos Comenius to Pestalozzi and Froebel. It is a fact, and everybody can see it who follows the development of universal history, that one fact develops itself from the preceding one. Before our time excellent men have lived, and they have prepared the ground, that our ideas may find a place thereon. We all are standing on the shoulders of our ancestors, and, therefore, also, Froebel does not stand alone by himself in his educational endeavors. Comenius, Ratichius, Franke, Salzmann, Basedow, Rousseau, Pestalozzi, Krause, Fichte, Diesterweg, etc., etc. What significance is attached to these names for education in Germany! Froebel, in many things, is very much like them, and in other things, again, he is widely different. But a Kindergärtner should be intimate with this. For it often happens that teachers who have read a little of Froebel, put the question: "What Froebel asks, *many others* have said *before* him;" for example this question: "Did not Comenius say that the play of the child was his work?" Ought not she be enabled to answer: "Who of them has, like Froebel, taken in hand so practically the education of the little-ones, that in it the germ of all future good might be placed? And *who gave us the means*, and discovered the laws of life, through which alone we can educate according to nature? Without a knowledge of the efforts of the past centuries no one is enabled to see why Froebel's efforts became a necessity, an historical act, and why Froebel, for all time, will occupy such a prominent place in pedagogy, We also must do justice to the time after Froebel up to the present day; this time must be looked upon and talked over, and the merit of the prominent advocates of pedagogical ideas should be duly recognized, and their writings read and criticised. The system of Froebel and his means, founded on old

and new physiological and psychological experiences and investigations, should be studied theoretically and practically, so that each Kindergärtner will be enabled to give as quickly an account for questions as well as she has learned to handle methodically the means of occupation. She must be, in the fullest sense, not only the guide of the plays, but, also, understand them thoroughly.

* The activity of the soul shows itself in the child as *play*. FREDERICK FROEBEL made use of this hint, giving the Kindergarten-games as the first object-lesson, and makes us notice the great law, which rules in the kingdom of form, viz: that from the different composition and arrangement of *a few primary forms, all* existing forms are made. The first game Froebel gives to the child is *the Ball*, generally called *the 1st Gift*. It consists of six, soft, colored balls, of the primary and secondary colors. The ball is the form of movement. Colors are the productions of light, and help to awaken the mind's light through the pleasure they create. These six balls are introduced to the child in every possible different and individual manner. The ball illustrates the general properties of form, color, size, weight, space, and density. As soon as the little hand is strong enough to hold something, the eye to see, the ear to hear, comes the desire to seize something—and what can be better suited to the infant's hand than the soft ball, which has neither corners nor edges? The ball can be fastened to a string, and many little games are thus carried out, whilst song accompanies the action of moving it up and down, left and right, front and back, round and round, so that the ear is as well pleased and trained, as eye and hand, and the game opens the mind *by degrees*. Thus in the simplest of games we are enabled to keep to the harmonious development of the soul's capabilities *through* the development of the body.



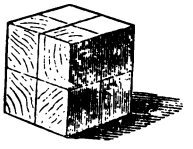
The second Gift consists of a wooden ball, a cylinder, and a cube. When the child grows older and stronger, it wishes to hold firmer objects; it unconsciously *compares*, which leads to knowledge. In order to gain clear knowledge the child must not be confused by too many forms—but draw its comparisons from a few primary forms which form a strong contrast. The two primary contrasts are *sphere* and *cube*, the cylinder being its *intermediate;* the sphere is the embodiment of *life*—the cube that of rest—the cylinder combining both qualities; the sphere is a unit—the cube a variety; the ball remains always unchanged in its apparent form, whether in motion or rest,—the cube

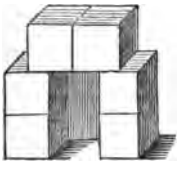


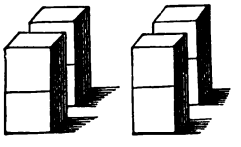
* EXPLANATION.—In consequence of the multiplicity of the cuts and the brevity of the text in these illustrations, the printer has found it utterly impracticable always to place a cut in close proximity to its explanatory text; in some cases the separation is a page or two.

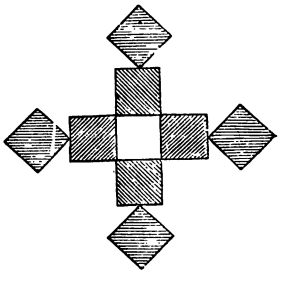
changes at the slightest motion and position. The connecting link, the cylinder, contains the ball and is contained by the cube.

The third Gift is a cube divided once in every direction, giving thus eight equal cubes. In the second gift the cube is used as a *whole,—now* the child, by this equal division, becomes acquainted with the contrast of size, and, as this division satisfies the natural desire of the child to see the *inside* of things, to see *how it is made,* he begins to tread the road of rational analysis. The child using the parts of the cube to rejoin them again to the original cube or or to *other new forms,* analysis thus ends in synthesis, and satisfies the child's desire *to create*—a little story enlivening the whole or a song accompanying the work. This gift is also used for teaching number; also symmetrical forms are made, so-called forms of beauty, whereby the law of symmetry is brought forward. One form always can be altered into a series of different ones, the child thus learning the composition and arrangement of things.

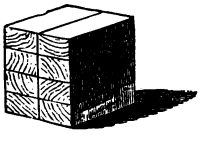


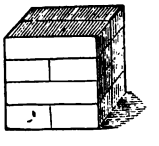


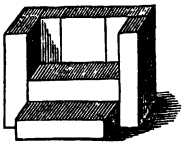


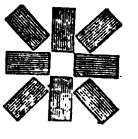


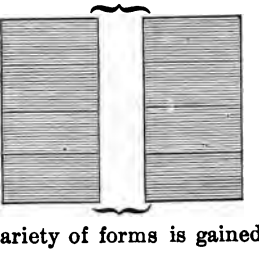
The fourth Gift consists also of a divided cube; it is four times divided into eight oblong blocks or bricks. The contrast of this gift with the former one consists in the sub-division of its parts; the likeness in their totality of equal-sized cubes. The cubes of the third gift are equal in height, length, and breadth; the oblong blocks of the fourth gift are twice as long as they are broad, and twice as broad as they are high. This gift is used in a similar manner as the former ones, but by the oblong shape of the

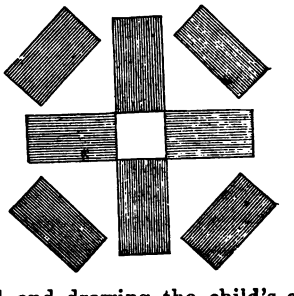








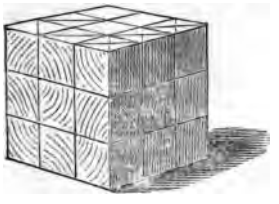


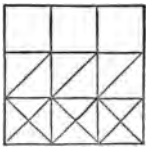


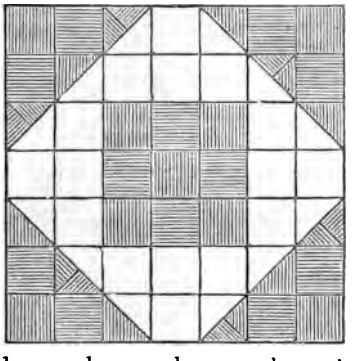
blocks a greater variety of forms is gained, and drawing the child's at-

tention to the difference between them, the geometrical qualities are brought forward. It was a wise intention in Froebel in choosing the number eight in the III and IV Gifts, so that the child might be able to overlook the material from which he builds. Children learn particularly in these gifts to develop in themselves the great law of *order*, which is the condition of everything that lives and moves.

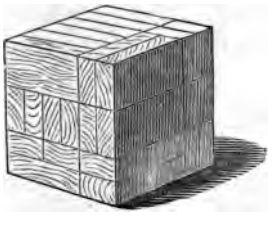
The fifth Gift is an extension of the third Gift, proceeding, as all development does, and all Froebel's occupat ons do, from the simple to the complex, from the easy to the difficult. This gift, like the preceding two, consists of a cube, though larger and containing a greater number of parts, 27 cubes, some of them being subdivided again diagonally into half and quarter triangular forms. The forms the child now can build are, of course, of great multiplicity, and look very real. Number can be developed to a great degree. The III and IV Gifts giving halves, quarters, and eighths—we can divide this gift into thirds, ninths, and twenty-sevenths; fractions, multiplication, division, etc., can be taught and demonstrated by each child without difficulty. The symmetrical forms are developed from a given ground-form—a central square and four triangles, which by equal, even changes, always keeping the opposites alike, give the most beautiful form. Geometrical forms and the forms of prisms are by slight changes demonstrated by the child.





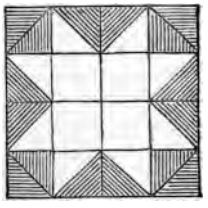


The sixth Gift is in size like the preceding cube; it is an extension of the fourth Gift, containing 27 oblongs, three of them being divided lengthwise and six across. This gift allows of course a far greater number of forms, than the IV Gift, and teaches in a simple way geometrical theory; also architectural forms and symmetrical ones can be built from it.



Until now *the body* occupied us. The primary forms of all that is real, form the solid foundation of all abstract ideas to which we shall attain in the further formation of the mind. The more we become acquainted with the universe, so much more correct will be our abstract ideas. In the first gift are already shown a preparation for abstract ideas; when, for example, we use the words, right, left, up, down, etc., these words are only the ideas of the movements of the body. It would be a very imperfect education if we passed straight

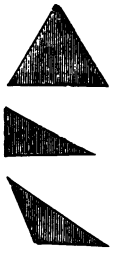
from material objects to the more abstract studies of reading and writing. Froebel used in his system the so-called "*laying-games*" so to say as a bridge to these. The universal progressive law is also here found in the connection of the tablet with the body, forming so to say the plane, side of the body.

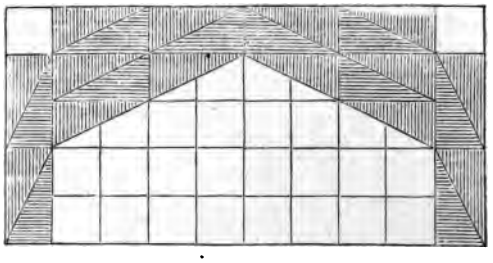


The square is given first, being the embodied side of the cube.

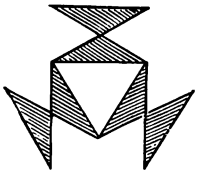
The isosceles right-angled triangle follows next, being gained by the diagonal section of the square. This tablet is followed by *The equilateral triangle, the scalene triangle, and the obtuse-angled triangle.*

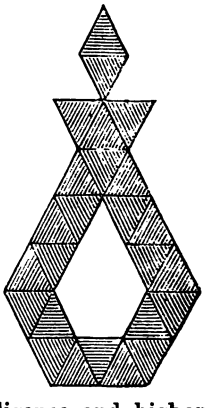
Other occupations developed from the plane, are: Paper-folding, paper-cutting, and mat-plaiting. *Pa-*

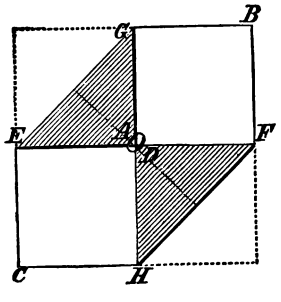


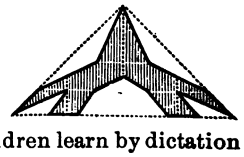


per-folding and *paper-cutting* rest on geometrical calculations; their ground form is a square piece of paper. The directions from right and left, up and down, etc., and their combinations are the directions in which the paper is folded and cut. The results of *folding* are either symmetrically joined together to stars, or used for baskets, or other kind of work. The results of *paper-cutting* are pasted on paper, by which the children learn again symmetry of form and neatness, and the endless changes delight the fancy and awaken the intelligence and higher undererstanding. *The mat-plaiting* rests on the law of weaving; one up, one down, and leads at the same time to the harmonious combination of color. The children learn by dictation the simple law of the patterns they get one after another, until they arrive



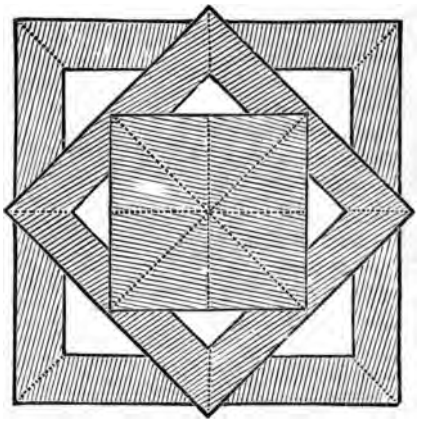




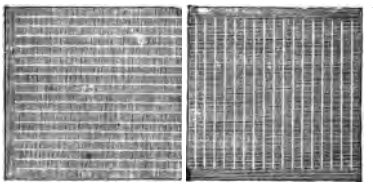


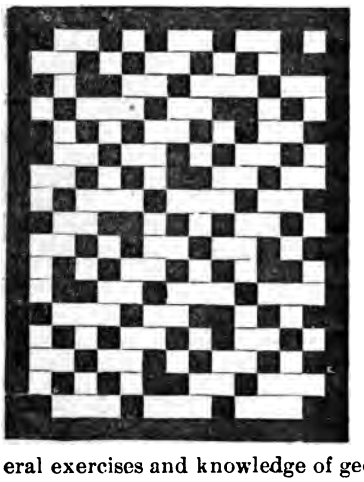
at *free invention* by which the teacher can judge of the effect of her work.

The finished mats belong to the children as the result of their labor. Hand and eye are not only practiced, but will, feeling, and power of thought are animated in a higher degree and developed to greater activity. The sense of industry and perseverance finds a reward in the finished work; restless and excitable children learn to bring their thoughts and acts into a persevering order and grow quiet, whilst sleepy and lazy children grow interested and active. Mat-plaiting is the arithmetic table of the child, for *number* conditions the pattern.



Stick-laying goes a step farther than the tablets; for *here* the child has only *outlines*—no body—no plane. The stick is, as it were, the *embodied edge* of the cube and the *boundary* of the surface—the tablet. This game especially develops the understanding of the straight line—*the basis of drawing.* The child lays with the sticks on the table, which is marked with a net of equal one-inch square lines, the different directions, angles, and rudimental geometrical forms, combines these to symmetrical forms, and lays the outline pictures of things he sees around him; also figures and letters can be represented, and the child is taught *number* with them.



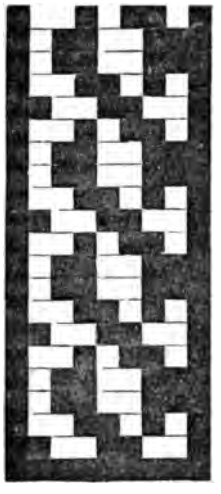


The wire rings and half-rings represent the *embodied curved line.*

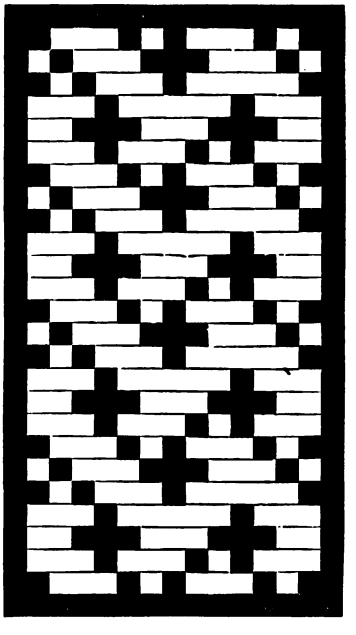
Other occupations with linear materials are:

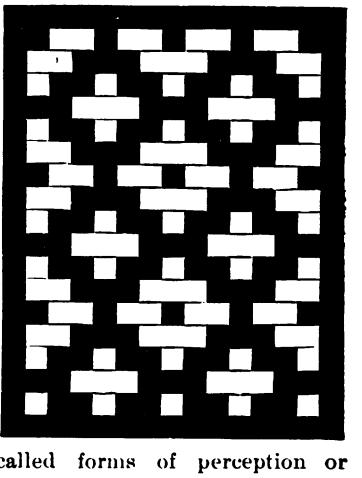
The interlacing of slats, the long, elastic, flat, and narrow slat being, so to say, the connecting link between plane and line. The slats are connected with each other, like the strips of paper in mat-plaiting—one over, one under, so that they hold and support each other. This occupation leads to many numeral exercises and knowledge of geometrical forms.

The connected slats are slats, stronger and shorter than the previous ones, joined by movable links, from two to ten in number. By means of these



links the slats may be moved into different forms, either *geometrical*

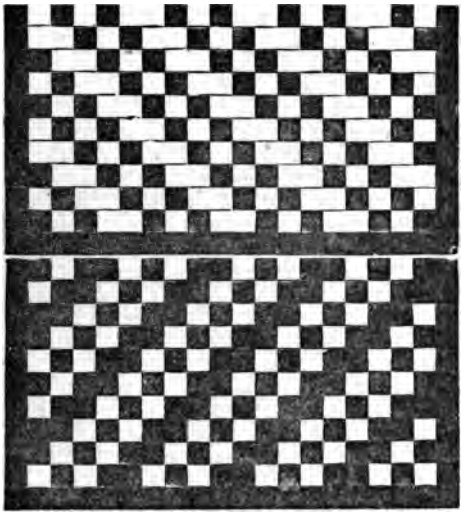




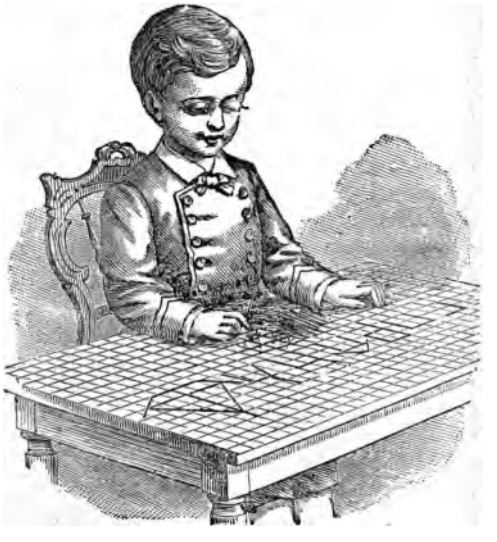
—so-called forms of perception or knowledge—*symmetrical* or forms of beauty—or *representations of objects*—also called the forms of life or use; these three classes of forms we find in all the gifts and occupations of the Kindergarten.

Paper-interlacing consists of long, narrow, three-times doubled paper-

strips; these are used similarly as the slats for interlacing, being though a more difficult and advanced occupation, as the angles have to be gained by "folding" the strips and *then* interlacing it. This occupation is closely connected with paper-folding and mat-plaiting. All such forms can be made that we see as decorations of dresses, ceilings, floors, walls, etc. It awakens the inventive faculties, so that imitating is not degraded to mechanical handicraft.

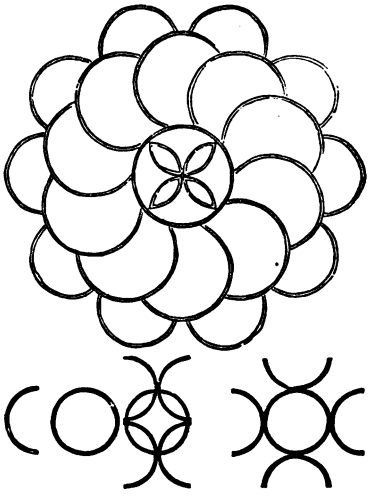


In the thread-game the line is even more represented than in stick-laying. The material is a colored thread 25 centimetres long joined in the ends by a knot; this is laid on the wet slate either in circular, square, or triangular form; a slate-pencil serves for tool. In the easiest manner innumerable forms of all kinds can be represented, which is the principal demand Froebel makes in regard to his means of occupations. This occupation may justly be called drawing with given lines.

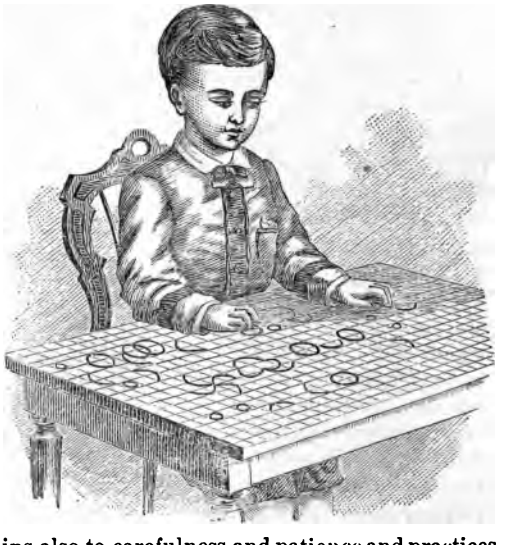


Drawing follows naturally, which is done on slates or paper covered with a net of equal squares which determines the length and direction of the lines. Froebel's drawing school rests on geometry. In stick-laying we had the embodied line,—in drawing we come another step nearer the abstract. In this linear system of drawing the child occupies himself always in an intellectual manner; it gives to the intelligence by its inventive mode, which forms its basis, the necessary nourishment for his development. For a child to be able to

draw alone without copy, *two* things are needed, viz: *to guide the hand and*



direct the intellect. Froebel gives the net of squares as a guide for the hand, whilst the intellect is directed by his law of contrasts and their connections—the law of harmony, which exists throughout nature. Vertical and horizontal lines form opposites—the slanting line their intermediate. After the straight lines follow the curved lines; free drawing or inventions are combined with the course.

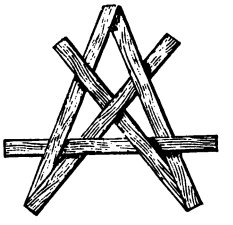


After body, surface and line the next step from the concrete towards the abstract, forms the point.

In pea-work lines and points are connected—sticks and peas—or wire and pieces of cork.

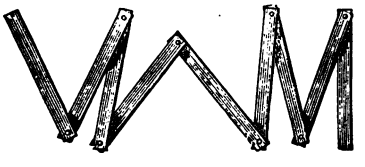
These are the chief means to teach the child to form plastically. Besides forms from life and nature also geometrical and symmetrical forms are made. This work trains also to carefulness and patience and practices

eye and hand. The fact, that the forms are skeleton forms, is essential in order to recognize the mathematical forms clearly. It serves also for

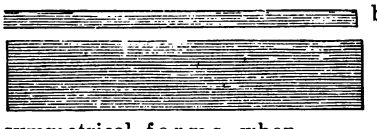


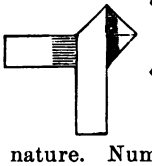
more advanced children as a means to make thorough practical studies of the angles.

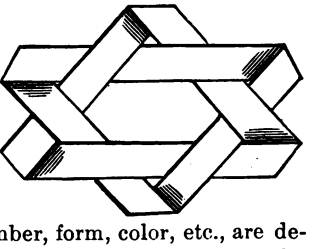
Pricking or perforating, for which are used a piece of paper covered with a net of square lines—or the outline form of an animal, a plant, etc., a pricking needle and a pad to prick on. As in drawing, so here eye and hand are exercised, and thus this is also an exercise preparatory for reading and writing. Before we have given the outlines of forms *in lines*; in *this* occupation the outlines are made *in points*. This occupation develops the sense for the beautiful and educates the artistic taste.



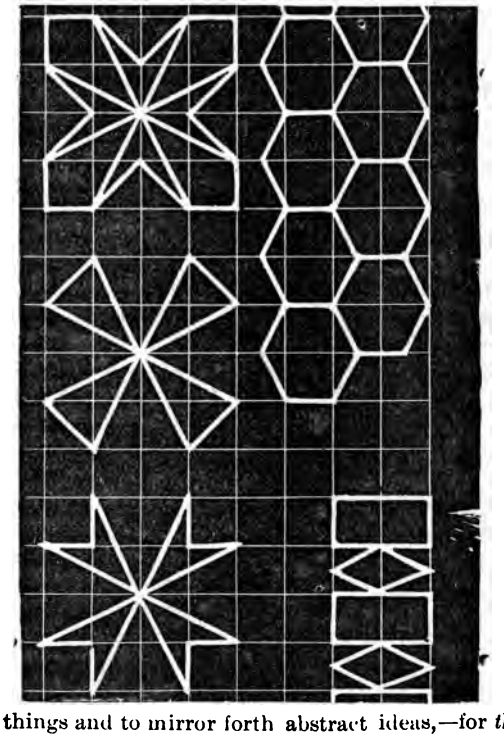
The sewing-occupation stands in the same relation to pricking, as cutting-out to paper-folding. In this occupation perforated points are connected by colored threads to geometrical or symmetrical forms when worked on a net of squares; also leaves, flowers, animals, etc., in outline form are used, when close attention must be paid to copy the colors of nature. Number, form, color, etc., are developed. Often this occupation is mechanically carried out by giving the child ready-pricked cards, and thus it is degraded to a mere sewing-school. The inventive power of the child shall be furthered *together* with teaching him the necessity of careful preparation for any kind of work as the chief thing to make the following work either a success or a failure. If the child has pricked, that is, prepared himself *carefully* the card he will use







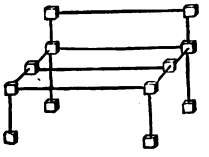
for sewing-out, he will be rewarded by the regular beauty of of the after-



work; if, however, he made his preparation in a *careless* manner, — all symmetry and beauty is lost. Now this lesson can not be taught if we give to the child *prepared*, perfectly-pricked cards.

Modelling in clay is a most effective occupation in the Kindergarten System,—it is like the fruit which bears the germ of new growth. Here we have it not to do with the knowledge of things and their abstractions,—but the child *makes* the object himself. The sense of the beautiful will be developed in a higher degree, and the moral being will be drawn out in full activity. Modelling does not depend on understanding *the laws* and *the beauty* of things and to mirror forth abstract ideas,—for *they must be found as realities!* This "self-forming" has a wonderful influence on moral beings, and fills up the difference which exists between *knowing* and *doing*. Through modelling we also implant a love and understanding of nature. Like in all other gifts and occupations a certain course is followed dividing it as usual into three parts: *forms of life or what surrounds us, forms of geometrical bodies*, and *forms of symmetry or beauty*. I strictly follow this course of mine based on *Froebel's doctrine of opposites*, where for each of the three abovementioned divisions the sphere, cube, and

cylinder, conjointly form the basis, and which course has been acknowledged in Europe among the first Kindergärtners, and has been introduced



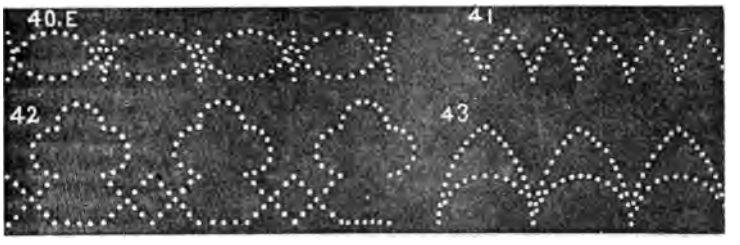
into the Kindergartens of the pupils of our Training-School for Kindergärtners in America. This doctrine of the opposites and their intermediates, can, practically applied, be easily understood by a child; it pervades the entire Kindergarten-system, and we find it everywhere in nature.

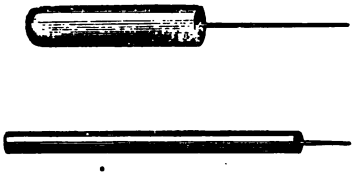
The Kindergarten gymnastics or games develop all parts of the body as well as the senses. These games are representations from nature—its life, and human occupations; they are more or less dramatic and are accompanied by song relating the story of action. There are different kinds of games, viz: for marching, walking, hopping, running; there are circle games; games for intuition, instruction; also arm, hand, and finger games. These games must be well understood by the teacher; they should vary according to seasons, weather, number, age, and mood of children, etc., etc.

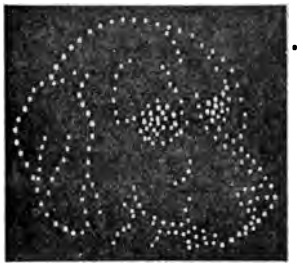
Music trains the ear, wakes the sense for rythm and time. Music and games include the learning of songs and verses.

Also the relating of stories is in the Kindergarten of great importance.

Stories are the means to form the mind, to see objects and appearances in nature; they develop language.



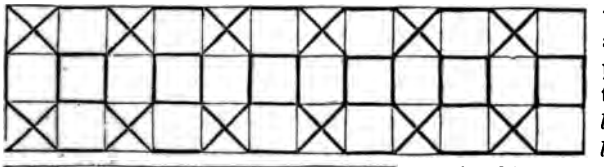


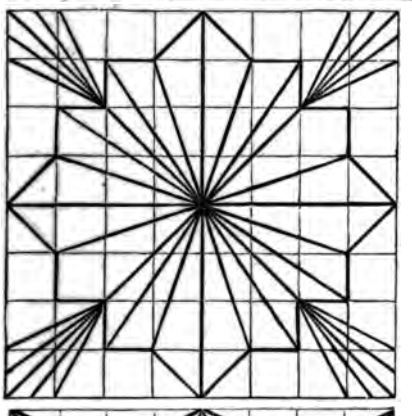


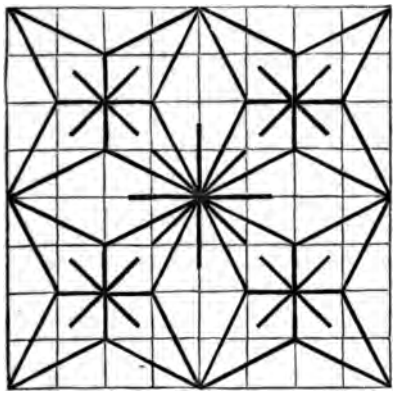
The care for animals and plants are also a means of education in the Kindergarten, *so* important that Froebel would have a real garden connected with each Kindergarten, that the child's love for nature may be developed; and the cultivation for the soil as well as the love and veneration of the Creator fostered. But all this does *not* make as yet a Kindergarten. The word "Kindergarten" does *not* mean "educating each child singly,"—it means:—"*learning and playing together in company*" as well as the individual management of the child.

Recapitulating the gifts and occupations we find them connected as follows: *Up to the Sixth gift* we have the bodies. *Tablets* are the next steps from the concrete to the abstract.—

The interlacing slats lead from the surface to the line, though otherwise they form *a step in advance* of the stick-laying, *because they are connected with each other*, and thus give permanency to the forms. *The little sticks for laying* are the embodied line, they may be thought to be *the divided surface of the cube* in order to retain the connection. *In pea-work* sticks (lines) are connected with embodied points (peas). *Connection* gives only permanent form to material. With this closes the first series of the A. B. C. of bodies. The following occupations pass over to a more flexible material, progressing from the body itself to its picture, viz: from *pricking* and *sewing* to *drawing* to which associates *color;* from drawing to the surface-line *in weaving* and *paper-interlacing*; then we proceed to the *paper-square in cutting and folding* representing the surface itself,—till at last we arrive at the body again in *modelling.* The same logic chain of intuitions, representations, and experiences developed from it connects all the parts. By teaching the child to use the gimlet, to prick sharply, to cut, to measure, to fold, by teaching him to model, draw, paint, we give him the rudiments of all industries. The element "to work" presides; the natural punishment in the Kindergarten is, to exclude the child from work.







In the discussion of this paper Dr. Cruikshank commended the system and remarked that it is a singular fact that a great portion of the human family go through the world "having eyes and seeing not." The Kinder-

garten system leads to the cultivation of the eyes, the ears, the hands, and all the senses and organs of the body.

MR. Z. RICHARDS, of Washington, D. C., spoke in commendation of the paper and said that he needed no conversion to the principles of the Kindergarten system, and that he believed they are the true and fundamental principles of all educational work.

MR. HENKLE said that new methods of education can be introduced into a new country like America more readily than in old countries with fixed methods, and spoke of the danger that imperfect views of FROEBEL'S methods might be disseminated by superficial teachers. The country had already seen a sad exhibition of the abuse of the great principles that underlie true objective teaching.

On motion of DR. CRUIKSHANK, the Chair appointed W. D. HENKLE, JAMES CRUIKSHANK and W. E. CROSBY a committee on the nomination of officers. Adjourned.

Second Day's Proceedings.

TUESDAY, JULY 11, 1876.

The Department met at 12 M. The HON. M. A. NEWELL of Baltimore read a paper on the Practical Aspects of Object Teaching.

[This paper has not been received.—*Printer.*]

It was discussed by DR. JOHN HANCOCK and MRS. ANDREW J. RICKOFF of Ohio, MRS. EZRA CARR of California, and the HON. E. E. WHITE of Indiana.

Third Day's Proceedings.

WEDNESDAY, JULY 12th, 1876.

The Department met at 11½ A. M. The following officers, reported by the Committee on Nominations, were chosen for the next year.

President, DR. JAMES CRUIKSHANK of Brooklyn, N. Y.
Vice-President, the HON. H. A. M. HENDERSON, of Frankfort, Ky.
Secretary, FRANK ABORN, of Cleveland, Ohio.

On motion DR. HANCOCK was excused from reading his paper "How shall we train our Primary Teachers?" with the understanding that he would furnish it for publication in the proceedings.

[This paper has not been received.—*Printer.*]

MISS MINNIE SWAYZE then read the following paper entitled

ÆSTHETICS OF EDUCATION.

"Education" is a word which we use almost always in a conventional way. We limit its sense, and mean by it a certain school-routine, and the study of certain text-books; by it we understand, the memorizing of technical facts and phrases, the skilful manipulation of figures, a tolerable pat superficial and purely mechanical knowledge of grammar and enough geography to save us from mortification. The most that we do is to exercise in a low and limited way the understanding, without reference to its profitable employment in putting vigor and method into our whole mental life. We do not recognize the primary truth, that a fact has but a limited value, unless we can bring it into a genuine relation to our highest and best thought. One may have the whole curriculum of the school upon his tongue, and at his fingers' ends, and yet be utterly ignorant of all which constitutes a rounded, balanced, and nobly productive mind. It is always the best way of investigating a topic, to begin by comprehending the full meaning of the word by which we call it. "Education," for instance—what is the real signification of the word? At the first glance, you see the truth in it, as there is a truth in all legitimate words. It means "to draw out." One of its colloquial meanings in Latin is "to hatch," and it was frequently employed to express material development, and in a physical sense. But we by "*education*" usually mean intellectual culture—we rarely apply it to care and training of the body, save as the *mental* may depend for its completed growth upon the *physical.* By education in this paper, will be meant *mental training* in the fullest signification of the phrase.

The first point to be considered then is that education is not wholly the acquisition of information, of facts, of statistics. These have their special use, and their separate value; they furnish data, secure accuracy, and check idle speculation. When we say that a man is ignorant, we mean that he has not these implements of facts with which the every-day labor of life is carried on. We properly regard one who cannot read or write or add or divide, as so far helpless; and doubtless he does work at a great disadvantage. Just so it is with a projector who has not even a smattering of the laws of mechanics; he wastes his time and wears out his heart, in the effort to invent a perpetual motion which was hopeless from the beginning. But if we would comprehend the wide difference between a technical and a philosophical education, we must start at the other end of the discussion, and find out what our system of education does not do for the population. We eliminate, to begin with, the large class of the absolutely unlettered, and the small one of the scholarly. Between these welters the sea of mediocrity—not necessarily a waste nor unproduct-

ive;—nay, alive with innumerable activities. Here are the productive classes—the commercial, the agricultural, the mechanical—here are the men who create homes and the women who manage them—here are the voters who by proxy make the laws, and some of whom are busy breaking the laws to which they have assented. We find in it shrewdness, tact, industry, patience, economy, and devotion to duty; and yet why is it that society as it is called so often wearies us? Why are we doomed to breathe so constantly the thin air of commonplace? Why is it that we so seldom encounter not alone original minds, but minds bright with the originalities of others? How many are there who read more than the newspapers, or with these a few cheap novels dear at any price? How many who know a good picture from a bad one? a well-proportioned building from an architectural nightmare? The profoundest lecture or sermon from the shallowest? How many are prepared to solve accurately a problem of political ethics, or remember history enough to help them to do it? How many are sure of a fine poem, unless a great name be associated with it? How many who possess what we call taste, and are not given to aud possessed by an ingrained and hopeless vulgarity? I have a great respect for the American people. In this year of all years, we must not overlook the national accomplishment of the past century, altogether the most historically wonderful of modern times. But in the magnificence of these material results, in our broadened territory, our multiplying towns, our increasing cities, our ever-growing population, we forget the true constitution of a state. There have been barbarous nations greater than ours, and the Roman Empire which covered the world, missed the moral force of Sparta and the grace of Athens. Always quality dominates over quantity, and the tendency of a rank growth, is naturally towards coarseness. No matter how many millions may be enumerated by our census—the ignorant and animal swarms of the East will still outnumber us. All masses take their tone and character from the individual minds which compose them. So too, material acquisition is mere heaping and hoarding, unless our riches help to make us wiser and nobler. Put these truths together: consider that millions of money without minds to devote them to real use are more luckless than the most squalid poverty; and you will then see the best purpose of which any system of education can be capable. In the light of these indisputable propositions, we see what may be considered the chief defect of all school education. I am not prepared to say that it can be remedied altogether. Every American girl or boy cannot have a private tutor, and in the school which counts its pupils by hundreds, individualty of mind must be in a greater or less degree ignored. You must have drill if you are to handle masses, and the tendency of drill is always towards the mechanical, and of school drill towards memorizing. Thus it is that we go on year after year, turning out hordes of pupils all fashioned according to one pattern. The whole know no more than each. Knowledge has been distributed according to some unwritten Agrarian law, and while all are equally wise, very few are specially so. It is true there has been a dole of provender, but hardly anybody has a stomach full. We see then that it is not by what it *knows*, in a scholastic sense, that the world moves.

Its best motive power is in its intuitions—in faith, in religion, in conscience, in love, in aspiration. But if we say to a trustee or a committee man, or even to some teachers, that the object of a school should be to promote them, we are not understood. He comprehends the advantages of grading schools, the necessity perhaps of keeping the school-houses in repair and of having them well ventilated; he knows the largeness and even the littleness of the school-book trade; he can make sharp bargains with teachers and keep them well up to their duty; he has made up his mind upon the problem of compulsory attendance; he declares seriously and sincerely that he considers our common-school system to be the very foundation of national prosperity and greatness; but it is safe to say that of education in its largest and best sense he has but a limited comprehension. For see how much there is to be cultivated in the child of which our systems take no cognizance. There is the heart with its possible wealth of affection, an embryo of truth, of honor, and of love! There are the tastes which may be low and mean, or high and manly! There are perceptions of duty as yet dim and uncertain which may be trained to acuteness and precision! There are the appetites to be restrained and disciplined and kept within the bounds of decent and self-respecting moderation! There is the virtue which fitly developed will save woman from an aimless life ending it may be in ruin, and man from brutality, and sensuality and selfishness! Do you say that this is moral training which is not the business of the Common School? I answer that it is the business of the Common School to comprehend the whole scheme of human life, and that it should concern itself with all that may make such life truly successful. We build art galleries and we fill them with the triumphs of the painter and the sculptor; and if these are to be for the benefit of the whole population why should not the children of the people receive their first lessons of the beautiful even in their infancy? Why should they not be surrounded at that season of receptivity, by all which may train the eye and educate the taste, and make fancy chaste, judgment accurate, and the imagination pure and elegant? There is the school-room, for instance; it is the apartment in which these little ones must spend a moiety or more of their waking hours. We may make it commonplace, hard, and angular, and colorless, or we may give it tone which will refresh the weary eye, and ornament which will be a primary lesson in art criticism. There are the manners which we may form and refine, remembering that courtesy is quite as important as arithmetic and that a genial address has its value as well as geography and correct spelling. If children are to be taught to read why not at the same time introduce them to what is most beautiful in poetry and to what is best in prose, taking a little pains to show them the difference between the good and the mediocre? These pupils as a class will receive no education of this kind at home, where indeed, they would not receive any good education at all; and it is because in general, home is not what it should be, it is because home is coarse and ignorant and evil in its influences, that the State interferes. All I ask is that the State should do its whole duty.

Nor need I say how much in this great work depends upon the teacher. A really good teacher, with a just estimate of the dignity of the profess-

ion, and with acquirements such as the position imperatively demands will find out ways and opportunities of doing the beautiful work, will engage in it though it is not in the contract with the committee. The first thing to secure is the confidence and affection of the pupil. The next is to awaken his interest and gratify his curiosity. Then he may be made to comprehend that mastery of the task is its own reward. You will not understand me as saying that the business of the school should be mere play. I believe in work and in hard work, even for children, but it should be a work which does not disgust by its abstractions or by over-tasking the faculties. I believe in play, but it should be play which does not waste time, nor absorb the mind, nor create an appetite for amusement alone. Fortunate is the teacher who can blend labor and recreation, and bring all the powers of the pupil's mind into a harmonious relation. You may be sure that no teacher will do this who does not love the business—no teacher who is working merely for a salary—who has not attained a moderate degree of culture, and who is not thoroughly conscientious. I always expect noble fruits from a school-keeper who loves school-keeping. I never expect any great results from one who is always dwelling upon the *désagréments* of the calling, and who is in a hurry to get out of it. Such teachers do all they can to degrade their vocation, and little understand its dignity and importance. They reduce education to a mere mechanical routine, and are themselves the most thorough mechanics of all concerned. The existence of this Association, the meeting of this Convention shows a genuine and honorable interest in the work, and true perception of its character; and no Convention, Republican or Democrat, held in this country, and this year of conventions, is worthier of praise or likelier to effect desirable objects than ours.

Finally there is nothing in the consideration of this subject, which impresses me more forcibly, than the ample opportunity of the teacher. To all labor expended upon the material there is a limit defined by the law of capacity or of production; but education is experiment cheered by great chances and encouraged by great possibilities. It is philosophy warmed and softened by the affections. It works for the best results in time and for the illimitable triumphs of immortality. The teacher receives his trust fresh and uncontaminated from the hand of nature. Bad intellectual habits are not yet formed; character is yet undefined; the intellect is plastic and unhackneyed; and the absolutely necessary quality of confidence, the fruit of a love which has not so far been disappointed, makes the relation of teacher and taught one of the noblest which can be established between human beings. The child looks up, in its helplessness and its need, with tender and trusting eyes, full of wants which it does not comprehend, and thirsting for knowledge of which it does not know the nature. Its faith now is just as beautiful as it was when the little Jewish children gathered at the knees of the Savior, and furnished him with one of the sublimest and most comforting of his illustrations. Here are the germs of all acquirements and the beginnings of all human progress. Yet all is in a delicately-critical condition. This callow mind may be warped; this heart now loving naturally may unnaturally hate; this innate desire of knowledge may be changed into a detestation of all

which bears the name—the school-room a dungeon, the teacher a tyrant, the book an object abhorrent or disgusting! All this is the melancholy result of our coarse blundering, and because so often we have neither hand nor eye, neither heart nor tact for the work. Nature has done her share; her provisions are bountiful and her gifts costly and wise; and now it is for the teacher to develop, to expand, to bring all into a harmonious union. What is the divine secret of success? What but love and patience, and a thorough comprehension of the responsibility involved? We sometimes say that the teacher stands in the place of the parent, and there is a great deal implied in the phrase. The mother, unless she is void of all the best instincts of maternity finds out a way of guiding the uncertain feet of her little one, of moulding its moral nature, of introducing it to the arts and economy of life. Here is the best, because it is the most rational teaching, impelled by the highest motives and governed by the most thoroughly natural instincts. This parental education the teacher in a school can only measurably impart. But if the same benevolence be his, the same in kind if not in degree, his work will be glorified by the same motives and dignified by the same results.

Shall I be told that I am asking and expecting too much? I dare say that I am, or at any rate that I am puzzling myself with some ideal of a school which it will be impossible to realize. But in this world, nothing is accomplished without impracticable ideals. We always fall short of our best aims; the higher these aims the less disastrous will be the failure. The more thoroughly we divest school-keeping of the mere mechanical drudgery the nearer shall we come to model schools. I grant that there must be labor; that a distaste for study may result from idleness, and that idleness is a vice to be corrected. But it should be remembered that a child can do only a child's work, and that there may be acquisitions even in play itself. I grant that the minds of many children seem to be hopelessly inactive, but I remember the example of not a few great men who gave no promise in boyhood of their future greatness. Good school-keeping is ceaseless experiment, which the good teacher will not abandon however slow may be progress and however frequent failure. But in no great work, is constant or immediate success the rule. Neither in any great work so much as in teaching, is there such opportunity for comparison and observation. The good teacher must necessarily grow in his art, or if you please in his science. Every class helps him to amend his methods. Every study throws light upon the means of imparting knowledge. We are all pupils; however much we may know we shall still be scholars at a school; and if we in the full maturity of our powers need help and can hardly go alone without our books and our teachers; if we are daily making mistakes and almost as often are obliged to retract our footsteps and start anew; and if, too, we need the best help and will not be content without it, how much more patient should we be with these children so standing in need of assistance, and so utterly at the mercy of mankind!

This paper was discussed by MRS. RICKOFF, DR. CRUIKSHANK, and Z. RICHARDS.

DR CRUIKSHANK then spoke upon "Text-books adapted to our Modern System of Education."

[DR. CRUIKSHANK's remarks have not been furnished for publication.—*Printer.*]

The subject was discussed by RICHARDS, and EVANS of Illinois.

Adjourned.

ZALMON RICHARDS, Sec. *pro tem.*

INDUSTRIAL DEPARTMENT.

First Day's Proceedings.

MONDAY, JULY 10, 1876.

The Industrial Department was called to order by the President, Prof. S. R. THOMPSON, of Nebraska, at 3:15 P. M., and the regular order of the programme proceeded with. The first exercise on the programme was the opening address of the President which was as follows:

To-day the Industrial Department of the National Educational Association holds its first regular session. The design of breaking up the general Association into sections during a part of the sessions is obvious. By this means we unite more closely those engaged in the same line of work; and provide for the discussion of subjects and methods which would not be equally interesting to others. For some years the question of organizing a Department of Industrial Education has been discussed, till to-day we find it no longer a question but an accomplished fact.

In view of these circumstances you will pardon me if I withhold the regular programme, long enough to permit a few suggestions regarding the work before us, and our legitimate field of labor.

This Department will naturally have before it three more or less distinct lines of educational effort: 1. General Discussions; 2. The Collection of Statistics; 3. A free conference over the practical work of the class of schools here represented.

And now a few words concerning each of these.

I. *The discussion of general questions growing out of the relations of industrial education to our various productive industries.*

These relations discussed from different stand-points, give rise to at least three questions:

1. To what extent does the material prosperity of the community depend upon the general diffusion of education?

2. What is the kind and amount of education that will best promote the material interests of the State, and increase its wealth and power?

3. How may educational instrumentalities in connection with manual arts, be most efficiently used to prevent crime, or to aid in reforming those already criminal?

The first of these questions has been ably discussed by many eminent men, and frequently receives attention in the general Association. It is generally conceded that there is an intimate relation between the diffu-

sion of knowledge and national prosperity. Yet there is need that the nature of this relation be more fully studied, till we may discern more clearly the manner in which intellectual training conduces to skill in manual arts, and leads to a more profitable exertion of productive energy.

In regard to the second question there is a very general want of unanimity. One indication of this may be found in the various and sometimes incongruous use of the word *industrial* as applied to education.—Many schools formerly called "Houses of Refuge," afterwards "Reform Schools," are now called "Industrial Schools." Again, all the institutions which received the National Land Grant of 1862, are frequently classed as industrial schools, though it would be hard to distinguish some of them from other colleges not so called.

It will hardly do to apply the epithet industrial to a school because in it are taught chemistry or some branch of learning "related to agriculture or the mechanic arts," any more than it would to call an academy a medical school because in it is taught an occasional class in Human Physiology.

Without going into the discussion of the subject, I venture to suggest, that the term *industrial* school be restricted to such schools as: (1) teach the sciences either in connection with manual arts, or with special reference to them; or (2) to such as teach manual arts and the sciences together as means of reforming juvenile criminals, and qualifying them to make an honest livlihood.

In regard to the scope of studies suitable for the education of those destined for industrial pursuits, we find a great variety of discordant and contradictory opinions.

To illustrate, PRES. PORTER in commending classical studies, says: "We contend that the college training is pre-eminently desirable for those young men who are destined for an active and business life, and that these least of all should seek for what is called a more practical course of study." This is thought to have been the opinion of the late A. T. STEWART, also.

On the other hand, MR. HENRY CAREY BAIRD, says: "Too much education of a certain sort, such as Greek, Latin, French, German and especially book-keeping, to a person of humble antecedents, is utterly demoralizing in nine cases out of ten, and is productive of an army of mean spirited "gentlemen," who are above what is called a "trade" and who are only content to follow some such occupation as that of standing behind a counter and selling silks, bobbins, and laces, or to keep books.—Quotations showing equally great differences of opinion might easily be multiplied.

Under this second question in regard to what constitutes an industrial education, a multitude of unsettled questions offer themselves:

Should any kind of manual labor be required of students in industrial schools?

If manual labor is required, what should be its purpose and kind?

Should there be any attempt to teach students trades in connection with industrial schools?

Should the technical and scientific education be imparted at the same time, or should a broad foundation of literary and scientific studies be laid before the technical studies are begun?

For what class of artisans should industrial education be furnished, only those who may become superintendents, directors, &c., or for the whole body of workers?

Are the present arrangement of studies, and methods of teaching in use in our common schools such as are best adapted to fit for the life of labor which is before most of the children in them.

The third topic under this head brings up the whole subject of industrial reform schools, and the ways and means of making them more efficient.

These schools are now doing a noble work and deserve the attentive study of all philanthropic educators.

II. *The collection and classification of statistics showing the condition and progress of industrial education from year to year.*

Many of the practical questions which press for answer, as well as many theoretical ones, can be met only by carefully-collected statistics. Theoretical discussions will not furnish answers that can be relied upon. We must consult experiment.

Such statistics are now not easily obtained, in such a shape as will repay study. But in the range of those who will attend this section, we may hope to find those who will take an active interest in the collection, collation, and study of our industrial educational statistics.

III. The last thing to be considered in the work of this Department is *the facilities it will furnish for a free conference of the teachers and officers of industrial institutions over the details of their work, and the best methods of reaching in practice such results as a theoretical study of the subject has shown to be desirable*

I mention this object last but I think it not by any means of inferior importance to the others. I do not forget that there are those in this great convention who are impatient over the mere mention of details.—*They* have no need to consider such common things as the "how to do it." They would forever revel in the metaphysical mistiness of general discussions. If we may believe these gentlemen, a teacher has only to exalt his soul to the ecstatic contemplation of the beatific principles of education, and straightway in some mysterious manner he becomes possessed of a knowledge of the best possible means of securing all needed results.

But leaving all these out of the question, I know that there are many teachers who ardently desire such conferences as I have spoken of. If there are any here present to-day who attended such a conference in the Normal School Department at Minneapolis last summer they will bear me out in saying that it was one of the most interesting, satisfactory, and useful sessions of that Department, ever held.

But it is not so much my purpose to discuss questions here as to suggest them for the consideration of the Department.

Fully convinced as I am that the greatest advancement to be made in the next decade will be in the line of industrial education, I have high

hopes of the useful work to be done in and by this Department. I trust that our deliberations may be harmonious and profitable to the individual members of our Department and to the great cause which it represents.

There being no discussion upon the address, the paper of Hon. EZRA S. CARR, State Superintendent of Public Instructions in California, was read by Mrs. CARR, Mr. CARR not being able to be present.

THE INDUSTRIAL EDUCATION OF WOMEN.

The British Royal School-Inquiry Commissioners of 1868, say: "An educated mother is of more importance to the family than an educated father," and the presentation of woman as an Industrialist, made so long ago in the Book of Proverbs, is accepted in every man's heart, as the ideal of true womanhood. I shall make no apology, therefore, for holding that the Industrial Education of American girls is one of the most important matters which can engage the attention of this convention. In considering it we shall recognize one of the strongest claims which labor is now making upon Popular Education, claims which, however imperfectly stated otherwise, are expressed in a growing dissatisfaction with the results of our public-school work. Intelligent criticism of this work has reached us from experienced teachers who recognize the difference between scholarship and education, whose pupils return to them with the pertinent and sometimes piteous inquiry, "What shall we do for a living?" and also from eminent industrialists, trained in the learning and culture of the higher institutions, who realize the unfitness of this learning and culture considered as the only armor with which the average American youth of either sex is to fight the battle of life. What Mr. LOWE said of the Oxford graduate, "it is astonishing how little he knows if he has stuck to his studies," voices the complaint of many a farmer and mechanic, who with infinite self-denial and sacrifice has given his son or daughter a good education. Powerful organizations of agriculturists and mechanics have resolved "that our public schools require to be made more practical," without adequately understanding the difficulties that will appear in carrying out the proposed changes.

But I think any teacher present, to whom the problem was given to devise a system of public schools for a new community, only a moiety of whose population were non-producers, and of whose children not five per cent would ever go beyond the public school, would find a way to make the training of the ninety-five per cent more practical than it now is. He would decide upon a course of study which, left off at any point, would yet have an immediate practical value, as helping to the self-maintenance of every individual. In our country, comfort and culture must inevitably go together.

According to the census of 1870, there are in the United States 12,505,-

000 bread earners, who give food, shelter, and raiment to the 39,000,000 of its inhabitants. Every bread earner has to feed a little over three mouths, and to do this 5,922,000 are engaged in agriculture, strictly; 1,765,000 in other rural trades and callings, such as blacksmithing, carpentering and the like, making, with their food dependents, 23,830,000 souls out of the 39,000,000. The manufacturers, including operatives and servants, earn bread for 1,117,000. Commerce, including merchants, shopkeepers, sailors, clerks, peddlers, bar-keepers, etc., earn bread for 2,256,000. Railroad and express men earn bread for 595,000. Miners for 472,000. Thus we see that agriculture fills ten times as many mouths as commerce, twenty times as many as manufacturers, forty times as many as railroads and fifty times as many as mining, or as the number of bread earners enrolled in the so-called learned professions. Yet our whole system of public education is professional rather than industrial.

Fifteen years ago the Massachusetts State Board of Agriculture gave the following reasons for introducing that study into their schools:

"The foundation for the intelligent pursuit of any business is laid in our common-school system. One fact, however, is certain, that nothing is taught in our public schools having any special bearing upon the future of that large class whose lives are devoted to the cultivation of the soil, and stranger still this class is the only one that cannot get the special instruction necessary for it any where else. There are private schools, academies and colleges tor the education of youth in other callings in life but not for the farmer, who usually leaves school at sixteen or seventeen and commences his life of toil without one general principle to guide him and to make intelligent the work he is performing."

This is equally true of the 400,000 women engaged in agricultural pursuits, equally true of the mechanics, the housekeepers. No wonder that these pursuits are being renounced at every decade by an increasing number of deserters."

Hon. B. G. NORTHROP, in his excellent paper on Labor and Education says:

"Every child's education is deficient who has not learned to work in some useful form of industry. The pernicious notions that labor is menial, the tools of the trades and the farm are badges of servility, ought to be refuted in our schools where our youth should be taught the dignity and necessity of labor, its vital relations to all human excellence and progress, the evils of indolence, the absurdity of the widespread passion for city life, and aversion to manual labor. A practical knowledge of some industrial pursuit is an important element in intellectual culture."

Yet another says:

"We take the child out of God's natural industrial university and send him to school, where at best only a fraction of his entire manhood can be properly developed, and where we do not to-day fit pupils for actual life in the elementary studies as well as they used to be fitted half a century ago."

But it is needless to multiply authorities. Mr. MORRILL, the father of the National movement in furtherance of industrial education, did not overrate the "discontent of laboring men" at the amount and the kind of

education they are now receiving, when in a recent speech before Congress, he said: "Pent-up discontent is not less explosive than pent-up steam. Some opportunity for learning how to do more and better work, must be conceded to our laboring classes, such training as the wisest of men find indispensable must be tendered to this vast human force, which if not wisely directed by those to whom such direction belongs, will be directed by demagogues."

There is not an argument for the industrial education of boys which does not apply with equal force to the education of their sisters. Whatever else is omitted from woman's training, just ideas of the dignity of labor, and a practical acquaintance with some of its many branches should be gained. She should be taught to recognize the necessity of it for the moral development of man, that labor is his mission, his destiny, his consummation, that the right to labor corresponds with the right to live. Viewed from a moral stand-point it is an obligation, from a social one it is a necessity—in both these aspects she should be taught to look upon herself as an equal partner.

It surely requires no argument to prove that the house-mother, whose work is never done, is of all beings an industrialist; that the laborer's wife equally with the laborer needs the training which will enable her to make the most of his earnings—to turn toil into thrift. The culture of taste, also, by which the lowliest home may be made lovely, is one of the rights which should be secured to the poorest woman.

Nor is practical training less essential to the unmarried. The disposition which that charming English essayist, Mr. Greg, makes of the redundant or superfluous women of his country, can hardly be accepted by the American sociologist. No matter how much our market may be overstocked, we cannot resort to exportation. Massachusetts must find something for her 63,084 surplus women *to do*, in view of the fact that the disparity in the sexes is increasing there, while the demand for woman's presence and work in those new States which have hitherto helped the others to maintain an equilibrium, is steadily diminishing.

The more carefully we look into this subject, the more imperative becomes the necessity for giving women an education which will help them to live, to vary their employments, for either in married or single life the burden of self-maintainance already rests upon a large proportion of the sex. It is not so much the fault of the capitalist, or of society that woman's labor is so poorly paid—it is the fault of her education that it is worth so little. And never until an industrial education shall give to women industrial power, and industrial independence, will that saddest of questions cease to be asked, what shall be done to keep the innocent and unperverted from sinking below the surface of reputable society, to cut off the recruits for the lost and perishing classes of either sex.

Again, the industrial training of our girls, diversity of occupation, a healthy activity of all the powers of mind and body is the only thing which can save the American people from physical deterioration. The girl of the period suffers by comparison with her grandmother, and it is little wonder, if, as a father said of his darling, she crochets all winter, and croquets all summer! Given a woman able and willing to work, she

meets a discouragement at the outset, in the fact that the few occupations which are open to her sex are so overfilled as necessarily to keep wages at the lowest point. The sensitiveness of the American girl is in the way of her usefulness, if she comes in competition with the stronger Irish or German maid, who has received a labor education in a rougher school. Hand-sewing at this day is slow starvation, and it is estimated that five years of steady labor at the sewing-machine will break down the average American woman. There remains *the profession of teaching* for which the average American parent believes his daughter to be competent as soon as she leaves the high school.

Mrs. LIVERMORE quotes from a State Superintendent of Public Education these words: "Remove all the teachers in the United States, and their places can be filled within a week," which is equivalent to saying that 221,000 people are ready to be recruited into this profession. That is the number of teachers returned by the last census, probably one-half this number are women. During the last six months the number of applications made by eastern teachers to this office for positions on the Pacific coast would seem incredible to you, applications accompanied by such testimonials of character and qualifications as to make one desire to see an organization of the National Industry effected, in order to direct this wasting power into the proper channels of activity.

I am daily reminded of the words of Froude, "the ten commandments and a handicraft, make a good and wholesome equipment to commence life with. A man must learn to stand upright on his own feet, to respect himself, to be independent of charity or accident. It is only on this basis that any superstructure worth having can be built." Though I should not stop with Mr. Froude with the ten commandments, or any where short of the intellectual training now given in our public schools, I feel with great concern the lack of the foundation he speaks of. Because of this fatal defect, our penal and charitable institutions cost more than our schools. Helplessness and thriftlessness still mock the efforts of philanthropy, and recruit the ranks of the vicious and depraved. The increase of crime in our country, and the documentary evidence of States like Massachusetts, where it is stated that in less than ten years, crime has apparently doubled, though the population has increased but thirty-five per cent., must be taken into the account if we would determine the moral value of our present system of education which has come to be openly questioned.

It is said that the government of the United States, both State and Federal, have since the year 1790, appropriated more money for education than all the governments of the world combined during that period, or, nearly $300,000,000 in seventy-five years. Were the results of this great experiment fully satisfactory, our school system would be impregnable. The fact that it is attacked in the name of religion itself, should set us gravely to consider how and where it can be improved, and whether the agencies now so successfully employed for the reformation of criminals, would not act still more beneficially if universally applied for the prevention of crime.

We find that during the abovementioned seventy-five years, foreign

governments have been expending large sums in technical education, with marked benefit in the moral and intellectual elevation of the people, as well as to their leading industries.

We find that oral instruction has been gradually taking the place of text-books in the primary schools; that the educational value of tools has been recognized as equal to that of books, that reading and writing are not the the first things taught, and when taught are made to include spelling without the waste of time which we devote to it; and in short, that *works* rather than *words* is the end of public education.

The confession of our shortcomings cannot be more humiliating, or less wholesome in its effects than those of English educators have been, who say, "our whole educational system, from top to bottom, needs an entire and radical reform to bring it into unison with the needs of modern society."

The withdrawal of our scholars for so long a period as is now common, from any participation in industrial labor, at the very period in life when industrial habits should be formed, is in my opinion greatly to be regretted.

"Whatever you would put into a nation's life must be put into the schools" is the Prussian motto, enforced by a system which turns out able farmers, mechanics, housekeepers, and nurses. While I would not advocate a servile imitation, or even the adoption of any foreign system I would apply the same principle here, and leave it to work out its results under our different conditions.

It is the duty of the State, as a business manager to look at the question of education from other stand-points than that of culture. "Industrial supremacy is the prize of industrial education." The State should lay the foundations of this supremacy, broad and deep. Every State should lay this foundation in the primary schools, should carry it forward by a well-devised system of secondary technical schools, and complete it in a University where prominence is given to different branches of learning, according to the directness and value of these as applied to the occupations and pursuits of our people.

Perhaps there was never a time when the relations of the Government to education needs to be discussed so thoroughly, and yet so temperately. That universal intelligence is the only guarantee of universal liberty, is one of the fundamental ideas of the American's political faith, but the right and duty of the State to educate has been better stated in monarchical Germany than in republican America. The great Fichte said: "The end of the State is not only to live, but to live nobly." And the clearest of writers upon the philosophy of education, Karl Rosencranz, said: "The idea that the Government has the right to oversee the school, lies in the very idea of the State, which is authorized and under obligations to secure the education of citizens, and cannot leave their fashioning to chance. The separation of the school from the State would be the destruction of the school."

With us it would be the destruction of the State; for here the diversity of the materials which form the State requires the unifying influence of a broad and comprehensive system of public education.

The work of the State in education may be divided into three sections. The first is elementary and general (and should be universal and free), making every child familiar with reading, writing, drawing or picture writing, with elementary arithmetic and natural history, and with the geography and history of his own State and country. In the second stage separation and specialization should begin, which will necessarily grow and perfect itself with the growth of culture and the more perfect organization of the forces of civilization. We now specialize only in regard to classes of unfortunates, the deaf, dumb, blind, etc.; by and by we can specialize as to uses, and make our country schools more preparatory to agriculture, horticulture, and the like; while our city schools, by vacation classes, half-time schools, and other agencies, at first, and afterwards by special schools, render the same service to the mechanic and manufacturing arts. The certainties of science are swiftly taking the place of the hap-hazard pursuit of those arts, and a great part of secondary instruction should be in the simpler applications of scientific principles.

In the third, or University stage of education, the one-sidedness of a particular or strictly technological training is rounded off by a survey of the relations and value of each specialty to others, without losing sight of a specific individual purpose. The University is as necessary a part of public instruction as the elementary or technical school, and should be the crown and complement of these. Below this point the States say every child *shall* be furnished with the means for the rational development of his physical, moral and intellectual powers; to this, instruction should be added which will enable the child to apply those powers in obtaining a livelihood; while at the gates of the University the State confers a privilege, and says to the youth: You *may* go up higher, and contend for the prizes of thought and activity. The University says: Here you shall find the natural sciences carried up into the science of nature; that the phenomena of society, of industry, of trade, of finance, of politics, are subject to fixed laws. The University is an organic encyclopedic representation of all the sciences, with their connections and relations.—And this is equally true of the arts, architecture, music painting, the drama—are like the sciences, bound together in a *Universitas Artium.*

While this is the true conception of a University, and should not be lost sight of in laying the foundations of an institution for all time, it is not immediately practical or adapted to the wants of young and growing States. The reason of this is, that the lower stages of public education are yet imperfect and unorganized. To expect to have a great University without a good proportion of high schools, and before we have a single technical school, seems to me preposterous. We may have students crowding into our University to get what other colleges give—liberal literary or scientific education—without getting a step nearer the ideal University, while numbers of the students of older colleges are found among us seeking for second-rate clerkships in threadbare clothes; but when we get the feeders to our University in running order, we shall find its utmost usefulness realized in the production of educated power instead of

EDUCATED HELPLESSNESS.

"We thank you," said the Iroquois Chief (in the year 1774), to the Gov-

ernment of Virginia, which had offered to educate some of their young men, " we have already had experience of your education, and some whom you have educated in all your sciences come back to us bad runners, ignorant of woodcraft, unable to trap a deer, snare a fish, to build a wigwam; we cannot accept your offer, though we appreciate your good will, but we will take a few of your sons and make men of them."

Something like this the people have been saying to the Universities founded upon the munificence of the State and nation, not because they do not appreciate education, but *because they do.* They need no argument to prove that it costs more to hang a man, or to support him in the State Prison than to make a valuable citizen of him, that it costs less to maintain a system of pedagogy, than of demagogy.

They know that where five agricultural scientists can find employment, five thousand skilful, intelligent farmers are needed in every State; that when five music teachers or fifty other teachers are wanted, fifty thousand capable women are needed in the work of home education.

More than thirty years ago, I was one of a handful of college teachers who urged the claims of the practical sciences to a larger share of attention in the higher institutions, and the extension of governmental aid to establish others in which the leading industries should climb to the intellectual level of professional callings. The leaven of the New Education worked very slowly in the educated mind of the country, but to-day we see all the higher institutions vying with one another in the thoroughness of their scientific courses, the degree of Bachelor of Science represents as much scholarship as that of Bachelor of Arts, and the doors of nearly all the colleges are open to young women, who, to use Margaret Fuller's words, "may become sea captains if they will," as far as the study of Astronomy and Navigation are concerned.

This is well, and the more this work is anticipated in the public schools the more thorough, complete, and satisfactory that of these institutions will be.

Let us keep the fact continually before us that only a small proportion of our youth go higher than the public school. Our present grading apparently makes the objective point the finished collegian rather than the independent industrialist, and the chief end of the college is still the professions and the few callings which are believed to approximate them in dignity.

The question we have to ask ourselves is, how shall we make the shop and the farm the home in which comfort and culture are alike the objects of attainment appear at the end of the vista which opens from every school-house door.

If we can do this, we shall make the value of our public-school system so patent that any and every other function of the government will be left to private or sectarian hands sooner than this. No greater obstacles are in the way than have beset the path of every reform.

Without the right kind of teachers, no reform is possible. The one business which it should be the special concern of the State to maintain in honor, which should be kept free from political or sectarian influences, which should be entered into with zeal and consecrated ability, and never

as a make-shift—is education. The educator, whether of the school or the press, stands at the point of power, and holds the highest office in the social economy.

The work of organizing the national education is now claiming the attention of scholars and patriots. Such an organization, in its higher and lower stages, will be impartial in its bearings upon intellect and industry, impartial as to sex, making a boy's training preparatory to a man's work, and girl's to a woman's, wife's, mother's work, and in both will recognize the intrinsic dignity of self-support.

The education required by a people is not a fixed quantity, either in kind or degree, and the condition and circumstances of laboring men of every class have greatly changed since the idea of public education first dawned. The experiment is historically so recent that a good many countries have not had time to make it.

The history of education fully explains why it is not more practical.—Colleges and seminaries grew up out of the monasteries, which for a long time treasured all the learning there was in the world. Learning was a monopoly; first of the priests, then of priests and the nobles, then of these and the Judges, and finally, and not without hard squeezing, the leech or doctor got into this good company, and then came the printed Bible to carry the art of reading wherever religious zeal could take it.—There was nothing but literature for education to use; it covered the whole field except mathematics. Columbus invented geography, and Galileo and Copernicus astronomy, long after the great European universities were founded. In England, whence our college system came, the aristocratic classes only were benefited by it, and it suited them very well. And when the common school got started, it simply took a few of the first leaves out of the college book. It is not so very long since men learned to read and spell in the Universities of Oxford and Cambridge. It took several centuries of human progress to bring rulers to consent that common folks should learn the alphabet, and again to get permission for women to tamper with the dangerous thing. It took a good while to get a spinning jenny, and a power loom, and a steam plow; and the education of the Oxford time doesn't suit the spinning-jenny age, as England has learned to her cost.

The State must fit its children for their places in the industrial ranks. The nation has two technical schools, one for training of navy, the other of army officers. Each State has one for the training of teachers, and a few have real training schools or colleges of agriculture and the mechanic arts. If these are what they should be, they will do for those pursuits what West Point and Annapolis do for the army and navy, viz: make men who are *proud* of their business. I wish those who think the base ball club and the boating club furnish a more dignified employment for the muscles of our young men than manual labor, could have been with me at the annual examination of one of the nation's training-schools, where high born and low born, without distinction of nationality or religion, learn—what? To scrub a deck, to furl a sail, to use every tool in the carpenter's shop, in the blacksmith's shop, to make and to mend everything that belongs to a ship, to be considerate, gentlemanly, orderly, to

command themselves and others, to obey, to love their country's flag, and to die for it without a murmur, to go down with the ship if need be—all this while they learn everything that is required in literature and science, for an education of the first class.

And must one be a soldier, or a sailor, to be thus furnished for his country's service, for his own service in the industrial state? Must our children be either paupers or orphans to secure any industrial training at the public expense? Shall a man be trained in all manliness to walk the quarter deck, worthy of all obedience because he understands what he requires, and has himself performed, not once, but a thousand times, all that he exacts from subordinates; and may he not have an equal training for the post of foreman in a mechanic's shop, for the management of his own broad acres, and the laborers he requires to cultivate them? Do you suppose they would put a man in charge of the Naval Academy, or tolerate a single professor in West Point, who thought practical education in war and navigation would prove "a failure"—was, at best, a doubtful experiment? No; that isn't the way they manage. Those old admirals and army officers are seamen and soldiers through and through, from boots to buttons; they believe in their business. The men who lead in industrial education must believe in it also.

The opposition to Educational Reform will come from several sources.

1. From that class of American parents, more numerous than we could wish, who do not expect *their* sons and daughters to work for a living. This parental false estimate of the true relations of industry to individual welfare brings its own correction and illustration, in useless daughters and spendthrift sons.

2. From the large number of teachers who depend upon text-books, and whose training has given them a bias in the contrary direction. This will be met by a thorough revision of normal-school work, by the extension of Kindergarten methods, and the application of them to higher industrial work, in which scientific principles are illustrated. Every Normal School and Institute should train for the model ungraded school in which children learn all about the objects, materials, and forces with which they have to deal in ordinary life.

In our cities there is no excuse for longer delay in establishing vacation schools in which boys may learn the simpler trades, and girls receive practical instruction in sewing, cooking, and other useful arts. Let us economize in the erection of our educational palaces if need be, to secure the means for this experiment.

3. We shall find opposition to any plan which tends to reduce the consumption of the books, apparatus, &c., at present required, and in the production of which a large amount of capital is employed. This too will be overcome, by the law of supply and demand.

In conclusion, fellow-teachers, let me say that if "Help yourself is the moral principle of America," it is high time that our profession, standing at the point of power and wielding the levers which move society, should recognize the fact that labor is necessary to give a proper balance to the intellect, and that industrial as well as intellectual training is required for the preservation of the advantages of which we boast. But our work

depends for its success upon the intelligent co-operation of the women of the nation, in the home, the school, and in all the varied walks of usefulness.

The following is an abstract of the discussion which followed the reading of this paper.

FRANK ABORN of Cleveland, Ohio :—With regard to Vacation Schools I fail to see why girls should be taught to sew and boys to do something else. I have learned to sew and the knowledge has served me a good purpose. I think a boy had much better go to school to learn to sew than to learn so much book-keeping as he often does. I don't see why boys should be barred out of one kind work and girls out of another, why a mathematical line should be drawn between the kinds of work each may engage in.

MRS.—— :—I prefer the Kindergarten system which begins at the beginning and in which each boy and each girl shall have a special training in the direction in which he or she shows special talent.

MRS. EZRA S. CARR of California :—With reference to the need of these vacation schools, the school children through the eight or ten weeks of summer vacation are almost a terror to their parents and to quiet people on the street. Something is required to employ their time and energies and vacation schools for these manual arts afford the most useful and most practical means.

PROF. MANLY MILES of the Illinois Industrial University then read the following paper on

INSTRUCTION IN MANUAL ARTS IN CONNECTION WITH SCIENTIFIC STUDIES.

The number of institutions organized under the Congressional land grant for promoting industrial education and the great diversity of opinions that exist in regard to their management and methods of instruction—give an importance to the relations of labor and study in an educational course that can hardly be over-estimated.

That labor is desirable in a system of industrial education will perhaps be generally admitted—but as to what extent it may be profitably used in imparting a knowledge of the industries and to what extent it may be required without interfering with the mental culture of the student—diversities of opinion will undoubtedly exist.

As the brief limits assigned me will not permit a full discussion of this subject I shall confine myself in the main to the statement of propositions that appear to me to be well-founded with the purpose of drawing out in discussion the opinions of the members present.

It would not be desirable on the present occasion—at least—to consider this subject in the abstract—and I shall therefore present it with sole reference to existing institutions engaged in teaching the industries.

As a starting-point I would call attention to the purpose of the Congressional land grant—which as concisely stated in the act itself is "to promote the *liberal* and *practical* education of the industrial classes in the several pursuits and professions of life."

No language could perhaps better express the purposes of the grant, and the emphatic declaration that a "*liberal and practical* education of the industrial classes" is aimed at, should be carefully considered by those in charge of the institutions organized under its provisions.

But what is the meaning of these terms—and how are they to be construed by those having charge of this great interest.

A liberal education has been defined to be "such as is extended beyond the practical necessities of life."

It is an education not limited by practical uses but one that gives the broadest and fullest development of the intellect—without reference to utilitarian considerations.

The object of the grant was evidently—to place within the reach of the industrial classes an education adapted to their wants in pursuing the industries of life—and to add to it that higher culture and mental training that would place them on an equality with those engaged in the learned professions.

The time-honored system of so-called classical education until within a recent period—was all that could be desired—as it furnished the key to all that was most prized in existing knowledge and gave a thorough discipline to the intellectual powers. Within the present century however—the wonderful progress of the physical sciences has opened fields for study and investigation that were not included in the old methods of instruction.

The intimate relations of these sciences to the various pursuits of life—gave rise to the belief that a system of education embracing to a greater extent the details of scientific knowledge, would be better adapted to the wants of those engaged in industrial pursuits than the classical course of instruction that had so long been taught in the higher institutions of learning.

The relative merits of the two methods of instruction, as a means of mental culture do not concern us here and we need not stop to consider them.

For our present purpose it may be assumed that a course of instruction that provides for a thorough training in science without neglecting those other branches that form a part of a system of liberal culture—is better adapted to the wants of those engaged in the industries than the exclusive study of the classics.

In accordance with this idea the Congressional land grant was made and industrial colleges were organized in several of the States.

It is for us to consider how they may best be conducted in conformity with the condition of the grant.

The precise terms of the land grant seem to preclude the idea that schools for teaching "*trades*" in the ordinary acceptation of the term were intended.

These could be readily learned elsewhere and the highest degree of manual skill and dexterity could be obtained in the practical routine pursued in the shops and on the farms.

The object evidently was to supply an existing want or defect in our system of higher education—by furnishing to the artisan and the farmer the means of a higher culture in harmony with their chosen pursuits and having a more direct relation to their interests—thus laying a foundation for the progressive development and elevation of the industries above the position of mere handicrafts that they had before occupied.

In addition to the study of language and mathematics and other disciplinary studies that were deemed essential in a liberal course of instruction—it seemed desirable to furnish to those engaged in the industries the means of acquiring a thorough knowledge of the physical sciences not only for their value in the direct applications that might be made of them in the business of life—but for the more important purpose of securing that peculiar discipline derived from their study—and fixing those habits of thought that are of especial importance in practical pursuits.

In some of the industries at least and particularly those relating to rural affairs the direct applications of science—notwithstanding all that has been claimed for it—are limited by the imperfect knowledge we possess of the details of organic laws and phenomena—so that the capabilities of science as a means of developing such industrial arts consist in the main in a hope that may be realized in the future—instead of a tangible reality that is now within our grasp.

From this state of facts it must be evident that the indirect influence of the study of science, in giving a familiarity with its methods of investigation and developing those habits of thought that are essential to the success of those engaged in experiment will prove of far greater value to the student than any direct benefits he may now reasonably expect to gain from its immediate applications in his particular industry—as it will enable him by the familiarity he gains with correct methods of investigation—to profit by any developments that the future progress of knowledge may place within his reach.

A knowledge of the true inductive philosophy and a thorough training in exact methods of experimentation cannot fail to be of far greater value to the student who would improve and perfect any particular industry than the most extended knowledge of empirical details.

If we acknowledge the imperfection of the industries in their present development—and look to their improvement—through the influence of those who now come to our industrial colleges to obtain some discipline and training in their life's work—it must be admitted that an accurate knowledge of the best methods of investigation, in connection with that breadth of culture that will enable them to make effective use of such methods must be of the first importance in their college course.

That manual skill in the practice of an industrial art is desirable, if not essential to the highest success must be generally admitted—but it should

not be sought in the college course of training to such an extent as to interfere with the full development of all of the intellectual faculties in breadth and depth of culture.

That manual skill and technical knowledge in a special industry may exist, without that mental training and symmetrical development that a liberal education is intended to give, is a fact that cannot be denied—and care must be taken to avoid the tendency in special culture to this partial and defective training.

The aim of industrial colleges should be to lay a broad foundation of mental culture in connection with thorough scientific training with a bias in the direction of the special industry in which the student is particularly interested and thus correct the tendency to that one-sided development that necessarily results from that exclusive attention to empirical technicalities and manual dexterity that obtain in the learning of a trade.

If the old methods of instruction were objectionable from the general neglect of those studies having a relation to the practical pursuits of life—the new education by limiting its methods to the purely practical, is liable to fall into the opposite error of exclusiveness and thus fail to a great extent in giving that liberal culture that is needed to supplement and correct the defects of exclusively-empirical training.

In practical education the idea of labor and technical training is involved to such an extent that it becomes a question as to how far they may be carried without interfering with that broad and full development that is included in the idea of a liberal education.

If we keep in mind the fact that a "liberal and practical education" is aimed at, we shall be less likely to urge the claims of the one at the expense of the other and be ready to adopt a course giving the best possible training in both directions.

In the old methods of higher education the student who had finished his common-school studies—was required to spend from two to three years in preliminary study before entering upon the regular college course of four years.

A liberal education therefore involved from six to seven years of severe study after the common-school branches had been mastered—and it is generally admitted that this time could be profitably extended.

In learning a trade several years of constant application were thought necessary to master its details and give the desired manual skill.

In Germany and England the term of service for an apprentice is fixed at from seven to eight years and in the State of New York the term is fixed by law at "not less than three nor more than five years."

Experience has shown that the requisite knowledge of details and the required manual skill could not on the average be acquired in less time than that fixed in these terms of service.

In most of the industrial colleges organized under the congressional land grant "the graduates of the common schools" are admitted to the college course which they are expected to pursue for four years before receiving a diploma.

Have these institutions discovered a "royal road to learning" which will enable them in a four-years' course to give the student a liberal edu-

cation and at the same time make him a thorough master of the particular industry to which his attention is directed.

Can we reasonably expect them to accomplish in the brief space of four years that which required from nine to fifteen years of earnest work under the old methods.

It is true, that a *trade* may be learned in less time by the student who has received a liberal education but it cannot be reasonably assumed that the education and the trade can both be gained under the new method in a shorter time than was required for but one under the old system.

The liberal education of the student may undoubtedly go hand in hand with the practical—with marked advantage to those who are to devote themselves to the industries, if the purely practical features of the course are not allowed to encroach upon and obscure the first grand purpose of general culture.

In a four-years' course of instruction in colleges aiming to furnish their students with the means of acquiring a liberal education in connection with practical training (particularly when they are received direct from the common schools) the grand leading object should be mental development in its truest and widest signification.

As a means to this end the physical sciences—from their direct relations to the industries—should receive prominent attention, but they should not entirely exclude those departments of study that serve to discipline the reason and judgment in other directions and give facility and force of expression.

The introduction of manual labor as a part of the regular course of instruction will be found under judicious management to possess many advantages.

Without calling attention to it as a means of promoting health and physical vigor—its claims in an industrial course may be urged for the following reasons:—

In its practice the student is brought in contact with the various processes of his special industry and can therefore better appreciate in all its details the practical instruction he may receive in the class-room.

It promotes habits of industry and tends to keep the student in sympathy with industrial pursuits while it gives him an increased interest in his special department.

As an incident of regular work the student to a certain extent gains a knowledge of practical details that can be learned in no other way and he acquires in a moderate degree that manual dexterity and skill that is only possessed in perfection by the experienced workman.

The practice of manual labor for the latter purpose alone would result in disappointment unless it was carried to such an extent as to interfere with his progress in more essential methods of training.

Proficiency in the manual of an industrial art can only be gained by a long course of practical training and time cannot be safely allowed in the college course to obtain it.

With a large number of students at work in the shops or on the farm it will readily be seen that it would not be possible to give them all that thorough training in every detail of work that would make them accomplished and skilled workmen.

Moreover this part of their training can be mastered elsewhere quite as well if not better than at college and it would be a waste of time and money to attempt to perfect it in the brief limits of the college course.

In the course of study however a mere smattering of professional instruction would be far from satisfactory.

The history of the special industry should be carefully studied and each successive step in its development should be considered with reference to its present condition.

Every principle involved in its various processes should be thoroughly mastered and the defects of the present state of knowledge in regard to its facts and theories should be pointed out as a preparatory step for investigations looking to its future improvement.

On the practical side of this new education—such a full discussion of existing knowledge in regard to the industry in question will furnish the only safe foundation on which all movements in the direction of progress must rest.

With the liberal mental culture we have urged on the one side and the thorough mastery of existing facts and principles involved in the industry on the other—students will be truly fitted to become masters of the art they practice and raise it from a mere handicraft to the rank of a profession.

The great dangers that beset our industrial colleges and threaten to divert them from their legitimate sphere of usefulness—arise to a great extent from the confused notions that exist in regard to a liberal education in connection with an industrial art.

It is too often the case—even with intelligent men—that it is supposed to consist in that technical training that gives facility in the execution of merely manual processes.

This may exist without a knowledge of the principles involved in the various processes of the art and without that breadth and depth of mental activity that is needed in the front ranks of industrial progress.

There is also a tendency to specialize interests and to apportion the different departments of science among the several industries in accordance with pre-conceived notions as to what may be practically useful in each while losing sight of the fact that each department or sub-division of science touches upon and is inter-penetrated by all others and this to such an extent that the mere specialist in one department is liable to fail in obtaining the best results from his labors from lack of an appreciative knowledge of the others.

The exclusion of all science from a course of instruction but the single department that is supposed to be of practical use in an industry—and a too exclusive study in this special direction cannot fail to give a one-sided development that will lead to disappointment.

If the industrial arts are to occupy the high position that is claimed for them and take rank among the learned professions—those who practice them must be men of broad views and liberal culture and their college training must not be limited to the narrow study of a specialty—and the labor required in their course of study must have a higher purpose than the mere development of manual skill.

The course of instruction in an industrial college should be broad and full—providing for that thorough mental discipline that will furnish a rounded and symmetrical development of the man as its first and essential object—while the technical training should be such as will lay the foundation for future proficiency in a special direction that will result in the highest possible development.

If our industrial institutions of learning are to teach trades as their leading objects and confine their efforts to imparting technical training and manual skill, they must abandon their high claim of furnishing to their students the means of obtaining a liberal education and sink to the level of mere training-schools in the arts.

This tendency to excessive specialization in the courses of study in industrial colleges leads to another serious evil that should not be overlooked.

It gives narrow views as to what is needed for the full development of a special industry and we find as the result a multiplication of departments of instruction on paper grouped under the imposing title of "University," while the means at command are not sufficient to sustain in a creditable manner but a single department.

Under this system the many departments are languishing and slowly dying from inanition while the apology is made for their lack of success—that industrial education is not appreciated.

Industrial education will never attain the success its importance demands until this fatal diffusion of its energies and funds is abandoned and a concentration of effort is made in the direction of real progress by developing and perfecting some single Department in a way that will demonstrate the correctness of the principle on which the Congressional land grant was made.

Thus far we have considered the subject with reference to students who intend to pursue a full four-years' course of study—with the purpose of acquiring a liberal education while fitting themselves to engage advantageously in some special industry.

In our industrial colleges provision should likewise be made for the larger number of students who will spend but from one to two years in study before engaging in the active business of life.

From the short time this class of students remain at college it will be readily seen that they cannot acquire manual skill or dexterity in their special industry while engaged in their studies and the labor required of them should have reference only to illustrations of class-room exercises.

The manual of their trade must necessarily be learned in the shops or on the farm.

In these short courses the student cannot expect to acquire a liberal education or to become familiar with all the details of his trade.

The aim should be to fit to understand and read with profit the works pertaining to his business that he may have access to after leaving school.

Mental training must be the leading object in his college course and this for his purpose may best be gained by making prominent the study of science so that he may become familiar with its facts and methods of investigation.

A thorough mastery of scientific principles will be of greater value to him than a detailed knowledge of some special department of science.

In these special cases a little smattering of some special department of science for the purpose of securing the advantage arising from its direct applications will only mislead the student and bring true science undeservedly into disrepute.

If our industrial colleges recognize the wants of this class of students and wisely provide for them, and at the same time furnish the means of obtaining a liberal education in connection with technical training to those who pursue the full course of study—they will be doing the work for which they were established and form an important part of our educational system.

After the reading of the paper Prof. MILES made among others the following statements in answer to questions:—The time which each student should devote to labor daily differs with the student and with the season. Have not found three hours too much, and usually the best workers have been the best students. As a result of this system about 75 per cent of the graduates of Michigan Agricultural College are engaged in agricultural pursuits, while of other colleges only about 1½ per cent engage in agricultural pursuits. The students work from one till four o'clock in the afternoon. Formerly tried to have details relieve each other at intervals but this involved too much confusion and trouble.

Mr. ABORN:—I think there is a strong disposition to crowd too much in a single course of study, as classical, scientific, and practical studies into one course. None too much time was found for the old courses when they included only Greek, Latin, and Mathematics, though it has since been seen that some sciences might well have been inserted. Now we are attempting not only to get these but practical training also into the same course. I would devote most of the time to the chosen specialty with some of the more closely related studies and let the student follow up these latter afterwards if he wished to.

Prof. MILES:—I would give the student a broad general culture and then some training in special studies, and then let him follow up the latter in post-graduate course if so inclined.

Motion was made and carried to open the meetings of this Department to-morrow and next day at 3 o'clock P. M.

The President appointed Mr. ABORN and Prof. PENDLETON a committee to report on the nomination of officers for this Department.

The Department then adjourned at 5 o'clock.

Second Day's Proceedings.

TUESDAY, JULY 11, 1876.

The Department was called to order pursuant to adjournment at 3 o'clock P. M., and the regular order of the programme proceeded with.

The paper of Prof. WM. C. RUSSELL of Cornell University was read by the Secretary, as Prof. RUSSELL was unable to meet with the Association. It was as follows:

WHAT CAN BE DONE TO SECURE A LARGER PROPORTION OF EDUCATED LABOR AMONG OUR PRODUCING AND MANUFACTURING CLASSES?

As the world moves out of the old darkness and slowly comes towards the light, the question of education gains more and more attention. Hitherto the education of the individual has seemed the individual's chief interest, but now the education of society is beginning to claim his duty. Wisdom no longer satisfies itself with the old way of furnishing the faculties of the man, but insists on the preparation of the masses to do the work of the whole. The rights of men are found to involve a right to be fitted for duty, and nations are studying the best ways of making every man most efficient. Attention formerly paid to armies is now claimed for schools, and more security is looked for from cultivated intelligence than from forts or navies. Monarchies that formerly staked their claims to superiority on battles, are now seeking it in education, and what was once extorted by force or filched by diplomacy is now sought in technical education. The supremacy of England has been shaken to its base by the intelligence of the workmen and workwomen of France; and Germany is now asserting a superiority to either, more honorable than the glories of Weissenburg or Sedan. While this contest on the other continent is going on let us learn from it that if America is to have any equal standing in the future market of the world, she must seek it by equally good work. The treasures of the material world are under our feet but they need to be worked up into useful forms. Our people are intelligent and energetic; but neither intelligence nor energy of themselves give skill nor economy nor prudence. We have natural advantages greater than those of any other country; but we shall fall behind unless we supplement those advantages by educated labor equal to theirs.

By technical education or the education of labor, we understand the training of men to do in the best way the thing which they may undertake in life. It is teaching the elements of knowledge which underlie work, that the workman may understand what he is about, and the reasons for his tools and manner of working, and the shortest, safest, and cheapest methods. It shows the farmer where the profits of his business are, the structure of the plants he is to cultivate, their wants, how to supply them, and the economy of different ways of doing so. It explains to the manufacturer the machines he is to use, the difficulties to be encoun-

tered, the advantages offered by Chemistry here, or by Commerce there. To the machinist it sets forth the principles on which the strength and speed of his work depend, verifies these by mathematics into convictions which cannot be shaken and puts into his hands tools which he may use and enjoy because he knows the reason of their power. To him who is to work in any application of science to material objects, it offers to show the principles, instruments, ways, and profitableness of what he is to do.

If it be true that a man enjoys his work in proportion as he understands it, and that a workman who understands and enjoys his work will do it better and more of it than one who is ignorant and indifferent, and if the prosperity of a nation depends on the proportion in which she produces more than she consumes, then certainly to every man of enlightened self-interest, of benevolence, or of patriotism, and to every nation as a whole, it becomes a matter of intense interest that the working people should be educated to the last attainable point in their work. How this can be done may well engage an hour of our session.

At this time the *best way* of securing the largest technical education is not our subject. What might be done under other circumstances, what ought to be done if our people were wise and just, or what could be done if we had the knowledge and the money, are not the questions for discussion here to-day. On another occasion it would be very wise and very profitable if some one should show the American people what their duty is and their highest prudence is in this matter. At present they are very ignorant of how much they need this kind of education, are not prepared to adopt *any* system, and such an exposition might quicken them. In the meantime let us see if anything can be done in our present condition. All that I propose now is to consider what that condition is, what organization for educational purposes already exists, and what modifications it admits of leading to a very good beginning and an appreciably valuable share of technical education.

While painfully aware of great defects in carrying out our educational plans, and of the lamentable shortcomings of the results, we may all admit that the system of education in this country is admirable. In the rural districts we have our district schools where the principles of all education, writing, reading, and ciphering, are taught. To these succeed our Academies or Graded or Union Schools in which pupils may learn Arithmetic, Algebra and Geometry, English Grammar and Composition, the ancient Languages, French and German, and the elements of Physiology, Physics, and Chemistry. These institutions generally give their instruction gratuitously. Above these we have Colleges where in addition to the languages, Literature and History, Mathematics is generally carried to a high degree and the elements of all the Sciences are taught. The system culminates in the University where everything ought to be taught as far as the point reached by the latest investigations.

The want of technical education, however, in all these institutions except the last is very great, and if the University fails to give it, is almost total. For the others nothing can be claimed on that score. The fact however remains that here we have a series of institutions for the education of youth from the primary elements upwards. The school-houses,

and Academy and High-School buildings, and College and University buildings, and teachers, schoolmasters, or professors, and some relations between the institutions and the State, and a reputation for efficiency altogether greater than is justified by the fact, and an immense influence over the public, all are there. Many of these institutions are comparatively inefficient, many would not exist at all but for individual pride or sectarian jealousy, many of them do positive harm by diverting from other institutions money and apparatus and libraries which if concentrated would be of countless value in education, but still they present an array of instrumentalities which if they could be infused with a new spirit and brought to a new method, would give us all that we need at present ask for technical education. "Infused with a new spirit" I say. This spirit must be that of usefulness not merely to the individual but to society. It must discard the idea of culture for the sake of the person and substitute for it the idea of faithful performance of duty to mankind. The object must be to create in the pupil the desire, and to furnish him with the ability to perform his part as a member of the nation. It must make usefulness his ambition and the improvement of the world about him his life's aim and satisfaction. Everything taught must be aimed at practical application to the wants of society. Every lesson must teach not only now to do, but what and why to do.

Let us see what of technical education a boy could get in our present institutions if they were conducted with this spirit and object. It is a well-worn path but we may perhaps find some new flowers at its side.

In the primary school the child before he reaches nine years of age can be taught Reading, Writing, and elementary Drawing, and can be trained to habits of observation and comparison. In that period he could be interested in the different stars, in the varieties of plants, in the characters of minerals, and habits of animals, and could be impressed with the sense of mutual dependence in society, and with the duty of kindness and helpfulness. The time now wasted by the teachers in some of their exercises is sufficient if the opportunity were properly used, for laying the foundation of earnest practical character in the pupils.

Between the years of nine and twelve the pupil could continue his Drawing and could learn Arithmetic, Grammar, Political Geography, and Physical Geography. His habits of observation might in this period be confirmed by encouraging him to make collections of minerals, plants, shells, fossils, the eggs and nests of birds, varieties of insects, and coins of different countries. The juvenile zeal for stamps if properly distributed is strong enough to furnish scientific museums of incalculable value to the collectors.

From twelve to sixteen he might carry on his Drawing and add to it Moulding in plaster, and with his now stronger powers of application he could easily learn the elements of all the sciences and one modern language. Impressed with the fact that everything he learned might be made useful to him in his business, he could in those four years learn Algebra and Geometry and the elements of Astronomy, Geology, Mineralogy, Botany, Physiology, Zoölogy, Chemistry, Physics, and Mechanics. Knowing that whatever he was going to do in life French and German

books could materially aid him, he would bring to the study of either not only curiosity but the active incentive of interest. The only thing necessary to his progress would be the conviction that what he was doing constituted a part of his afterwork, and was in fact the beginning of his business and of his success.

From sixteen to twenty the young man has the opportunities of the colleges. Many of these are now out of date. They were founded in imitation of the English systems which looked more to personal culture than to usefulness as the object of education. They base their teaching upon Mathematics and Greek and Latin, and in the small curriculum of fixed studies to which their limited means confine them, they cultivate, without regard to the taste, choice, ability, or future destination of their pupils, the same things for the same length of time and to the same extent to everyone. When every State shall have a University worthy of a State the sectarian prejudice which now maintains these small institutions, will yield to the desire of higher education. In the meantime however, they will be compelled either by self-preservation or by public opinion to give their students their choice of studies as far as possible. Indeed there are few of them so feeble that some degree of option is not already allowed, some approach made to becoming practical. In these elective courses the students should be able to a limited degree, and in the University he should be able to any extent, to pursue the studies bearing on the profession, business, manufactures, or calling of any kind, to which he may intend to devote his after life. If he is to be a farmer, he might study Agriculture, Trigonometry, Surveying, Physics, Botany, Chemistry, Zoölogy, Veterinary Science, and Construction of Farm buildings. If he is to be a miller, he might pursue Mathematics, Mechanics, Hydraulics. If he is to be a Druggist, he might study Chemistry, Mineralogy, Botany. If he is to be a merchant, he should find the opportunities of studying Political Economy, Finance and Banking, Physical and Social Geography, and Book-keeping; and thus whatever else may be his intentions, whether to pursue Engineering, Mechanics, or Manufactures or other calling, he would find partially in the colleges, and ought to find completely in the Universities, the means of preparing himself for that special pursuit.

Here then we have institutions in existence constituting a series leading from the primary elements of education to the last and highest, and capable if properly directed, of giving a large share of technical education. The machinery is here though it requires great improvement. If we will suppose that in addition to it we have evening schools for instruction in Science, in which the working young man actually started in his apprenticeship, could add to his previous training the study of Sciences connected with his calling, such schools as we have at the Cooper Union in New York, and we will complete an organization admirably fitted to our purpose. The only object of this paper is to show this fact and to urge the judicious use of the means we have, instead of waiting for some grand reform or some extraordinary device for getteng what we seek.

Of course the objection will at once be made that as a general thing the teachers of our primary schools are only one-tenth educated themselves,

and that the young assistants in High Schools by inexperience, by short tenure of office, and by want of interest, are with few exceptions disqualified for giving instruction such as a young man may depend upon when his business is to rest upon his knowledge. Unfortunately for all concernen that is the truth, but would it be any objection to an engine that the engineer was incompetent? Change the teachers, and change again and again until we get good and sufficient ones. For technical education we want no boy-teachers preparing themselves for college, nor young schoolmistresses preparing their dresses for matrimony. We need live teachers, good, earnest, judicious, patient teachers, eminently practical, and anxious above all things to prepare their pupils to do the best possible work in their trades, employments, or professions.

But we can not get such teachers for the prices which rule in the brains-market. No—the silk robe is worth more than the cocoons, the marble more than the oyster-shells, the tempered blade more than the iron ore, and if we want an educated man we must pay him the cost of his education. This should be the first step with any reform in education, and this step is simple honesty, any other course is dishonest. It is dishonest to set incompetent teachers at the head of schools, it is dishonest to carry on an institution at the expense of men whom we employ at rates below what they are worth. It is true that we cannot get good teachers for what we pay, and it is well that it is true. It is a check to educational meanness. Pay enough to attract the best men from other places, pay enough to make the situations desirable, pay enough to make the social positions comfortable and honorable, pay enough to make them so pleasant that no man would wish to leave them.

The increased prices however must come from the people and they will not consent to pay them. Here is the root of the difficulty. There is none beyond this, and we must overcome this or be overcome by it.—The whole question before us turns upon this point. To procure a larger share of technical education needs money with which to reënforce our existing institutions. With money we can have technical education, without money we cannot. With the institutions we have we can procure it with the smallest expenditure. Without them the expense would be hopelessly large. With them or without them the same necessity of procuring support exists.

From whence should this support come? Justice, interest, expediency, self-respect, all combine to say from the State. We must be satisfied of this or the whole reform may as well be abandoned, for we have no other source on which we have a right to rely. Individuals have from time to time, given large sums for education. The names of Harvard, and Yale, and Bowdoin, and Cooper, and Vassar, and Cornell, and Vanderbilt are immortalized by gifts of private fortune. They have done a great deal of good in their way, but they have done this harm that they have turned men's minds away from the source and the only proper support of education. The people need technical education. To make and sail the ships which carry the commerce of the people, to build the railroads and bridges, the churches, theatres, and homes of the people, to furnish convenient and lasting clothing of silk, woolen, cotton, and linen

for the people, to make serviceable and profitable tools and machinery for the people, to enable the people to use the forces of nature in Agriculture and Mining, to help the people to change the raw material of nature with the least waste, into articles which they need, to aid the people to raise themselves to a higher enjoyment and a larger share of the blessings of civilized life—and to carry that civilization higher and higher —to do these things on whom should they call? On rich individuals? On men whose unassisted energy and invention have been rewarded by wealth? The people have no claims on them. There is neither justice nor self-respect in looking to them when living, nor in looking after their wills when dead, for help. No, they should look to the State, the organized people, the community, to be benefited, secured, enriched, strengthened, and honored, and not ask but demand from it the help they need to prepare themselves and their children for general usefulness. The State which can equalize so that the individual shall not feel it oppressively, a burthen which is to result in benefits a thousand-fold to each, is the power to which we must go.

The terms of the question then have changed and it now is, What can be done to make the State support technical education for the industrial classes in our educational institutions? The answer is a painful one to many because it implies hard and long and inglorious work; it will chill enthusiasm for there are no brilliant sacrifices in it; it will drive off genius for there is no reputation in it—but it is the only true answer—*We must influence public opinion and we can succeed only when we have converted public opinion.* No great reform was ever effected in any other way.—The world does not improve by jerks. It moves very slowly when it goes forward, and those who help in its progress do so little by little, patiently giving to their effort time, and energy, and comfort, and rest, and study, and thought, hour by hour, until they make up years and perhaps a lifetime. There is nothing dashing about reform, abuses are not carried by assault but by careful, faithful, and generally unhonored work.

In this particular case we need money from the State and to get it we must make up our minds and direct our efforts to change the prevailing views of men as to the importance of technical education. The ignorance on this subject is thick and hard-set. It requires to be treated with intelligence, and patient working, and good tempered knowledge of human nature. The parents of the children who need this education have the smallest conception of its value. Children are with them means of making money. A day at school is so much time lost. The parents worked their way without book-farming, or book-mechanics, or book-house-building or working by book in any way. The people who read most books seem to them the most incapable of doing anything useful.—They can point to scores of college boys who can not earn their salt. Their own families are large, their work is precarious, they wish to pay their way as they go, and every dollar that their children can earn is wanted to save them from debt. Their school taxes are already an oppression and a fraud and they will vote and work against any man who is in favor of raising them. The first answer then to the question is that we must convert the prejudices and ignorance of parents into convictions

that their future welfare and that of their children depend on introducing technical education into the schools.

Others however remain who offer the discouraging obstacle of indifference as to the whole matter. The average citizen cares nothing about it. Everyone is busy in finding something to do himself. Work is hard to be got on any terms. For a man to spend money to fit other people's children or even his own to do work when workmen are standing idle by thousands seems quixotic. Then the Chinese seem to him likely to monopolize all the work which the German operatives will leave. It is a bad time to ask a man to support expenditures for technical education when the apprentices are already the greatest losers by competition. He is afraid that the American industrial classes have already too exalted ideas and that they are suffering now from too much rather than too little education. The second part of our answer to the question before us must therefore be that the indifferent are to be interested and changed.—This too calls for long and persistent endeavor. Books must be written giving the experience of England, of France, and of Germany on this subject. Lectures showing the superior value of educated labor, delivered over and over again, everywhere that there may be a chance. The press must be employed to din into the public mind until it accepts them, the momentous truth of which it seems so ignorant. Those who do not know it must be made to feel that this is a matter vitally concerning the future of our country and of our countrymen, and that in its solution no intelligent man can occupy neutral ground.

There is a class of men who exercise a great influence on our popular education, and who may with less difficulty be brought to a proper appreciation of this subject. Trustees of District schools and School Commissioners in the country, and members of the Board of Education in our cities, are not generally controlled by any decided views of the wants of the community in regard to education. These offices are unsalaried and are usually given as matter of compliment to politicians who have no especial ambition or no ability to obtain more profitable places. There are many very deserving and faithful men among them, but the majority assert no claims to know anything about education. They represent constituencies who, in the country especially, look to them to see that the school-taxes are kept down. If they can employ teachers at smaller salaries than their predecessors, they establish a claim upon the gratitude of the voters. Woe to the member who becomes notorious for his desire to increase the facilities of education! How many of us know these officers and have a reasonable influence with them and have never said a word nor taken a step to induce them to make education in their schools more practical! We must give up this foolish non-interference if we mean to accomplish our object. We must persuade these men of the waste of time and opportunity in their schools, of the waste of money spent on incompetent teachers, and of the great advantage of making the schools auxiliary to the future workshops or factories of the pupils, and of the need for this purpose, of good teachers paid sufficiently well to be secured in their places. There is no doubt, furthermore, that we are bound, if we are earnest in this matter, never to neglect an opportunity of our-

selves taking a seat upon these Boards and personally doing what we can to turn the course of instruction in a practical direction. No man who neglects such an opportunity ought to talk of his interest in the promotion of technical education.

There is another officer who could if he would, do more than all others to effect this change, and that is the one who generally under one name or another, superintends the public instruction of the State. He is in direct official relations with all the public schools. He is supposed to know what the teachers are doing, and it is his duty to report to the Legislature their condition and to recommend such improvements as he may think desirable. His influence over the schools therefore, could be made very great, and the Legislature must at least listen to him. Any State in which he could be brought to feel the importance of greater attention to popluar education would have great advantages in this movement. These steps are all important and indeed are all essential to the complete success of the plan. They all lead to the last measure without which nothing can be done, the influencing the Legislature to make appropriations and impose the consequent taxes for technical education. If the opinion of the public could be enlightened there would be no difficulty on this point.—The legislator does not run counter to the expressed wishes of his constituents. We too may have something to say about the appointment of our legislators.

On the other hand valuable reforms may be advantageously inaugurated in the State Senate or Assembly, and to these we should methodically and persistently apply until we succeed. Petitions ably setting forth the exertions of foreign countries to educate the industrial classes for their vocations, and the danger of our falling behind, the pecuniary value of such education to the State, the greater value in elevation of character, and the necessity of action by the State, would if proper pressure were brought to bear, have to be reported on by the Committes on Education. "Technical education for the industrial classes" would be a popular cause. Discussions could only tend to spread the facts and make the truth to be felt. Whatever the immediate result the cause would gain.—It could lose nothing by defeat except time. Ultimately it must prevail and in this faith the attempt should be repeated until the success come.—No one can doubt that under a government by the people for the people, education of the children of the industrial classes can be secured if persistently demanded The only danger is that perseverance would be followed by too exclusive attention to industrial education, and that our civilization might become too technical and material.

With the Legislature favorable to grants for technical education there would be no difficulty as to the objects of appropriation. These might be made in aid of the District and the Graded schools in proportion to the number of hours devoted to Scientific studies; in aid of scientific education in the Normal schools; of non-sectarian colleges to support professorships of technical branches; for the creation of scholarships for graduates proficient in the same. They might increase the pay of teachers in all public schools, support evening schools, and make competition in scientific attainment honorable and profitable. The present organization

offers abundant opportunities, if the Legislature can be brought to a desire to use them. The result would be a quiet revolution in education, a steady advance of our country in every department, and the rapid progress of our countrymen and countrywomen towards competence, and means of development and happiness.

No one is more aware than the writer that there is nothing new in what has here been stated, and that it may well seem an abuse of time and opportunity to occupy such an audience with such common plans.—His only apology is his conviction that the end to be accomplished is of incalculable importance to the happiness of our country, and that the great danger of missing it lies in seeking extraordinary means instead of using those which are at hand.

At the conclusion of Prof. RUSSEL's paper the subject was opened for discussion of which the following is the substance.

Mr. ABORN:—I know nothing of the writer, but it is evident that he knows little of what is now being done in the common schools. Conscientious teachers can cram the time full with the studies already there. Besides that the manner of teaching is of more importance than to cram in a dozen studies at once. Again, what good would it do to change teachers when the kind wanted cannot be got at all or at any price? Furthermore I do not think the State can give a technical education even with a mint of money. There must first be a demand for this kind of education, whereas it is now held in positive disrespect by those who most need it. Finally, the paper does not provide time for the boy to learn a trade. This is necessary and requires from four to eight years. The mechanic must be made. He must be made in the day time, at the bench, and at that period or age when his services are not so valuable. I would not drive the boy out of school to a trade, but at the age of fourteen or fifteen years, when he usually goes to work at a trade I would open an evening school for him where he might be taught drawing and the elements of chemistry, natural philosophy and mechanics, and so far as practicable the application of these sciences to his work. I would give him the benefit of this school six months in the year for three years. Thus we should get our skilled practical mechanic making use of his scientific studies and showing their advantages to others.

Prof. MILES:—There are one or two points I would like to present in relation to this subject. The first is the increase of studies in the common school. Some students come to our college representing that they have studied some of the sciences in addition to the common branches, as arithmetic, grammar, geography, &c. These we find almost always deficient in the common branches as compared with those who have pursued only the common branches. The second point is that farmers and mechanics do not understand the designs and purposes of industrial colleges, but have some false and preposterous idea of what they are trying to do. The teachers in these institutions are somewhat to blame, because they have themselves no clear idea of what they are trying to do, or of what is

possible to do or of what will be of any use if accomplished. The third point is that money cannot secure teachers for technical instruction, for they are not to be found. It is more difficult to find teachers for these positions than for any other. As well as successful teachers they must be persons of executive ability. It is easy to find those who succeed either in the class-room or the field or workshop, but it is rarely that one is found qualified for both.

Prof. HAMILTON:—To cross the sea we must have timber to build ships and likewise in industrial education we must have students. This is where we fail. Vocations paying well will have their workers fitted to engage in them. The industrial arts do not pay sufficiently well to justify the extra expense of getting the education, and it seems to me that until we can offer remunerative positions to our graduates it is useless to expect a very large attendance of students in our industrial colleges.

Pres. FOLWELL, of University of Minnesota:—The agricultural colleges are not designed to teach labor. They are not adequate to this purpose, nor is it required. As a *laborer* the American is now ahead of all others and needs no greater proficiency but we do need more intelligent directions and superintendents. The time is also coming when in certain branches the American laborer will come into competetion with the European. Then we shall want to educate the laborer for his special trade, and it will be done not in colleges but in industrial schools located near the centre of these special industries, as is even now the case in Europe.

Mrs. H. M. NASH:—I also frequently find that pupils know many things indifferently and none well and think it comes from over-crowding the courses, trying to teach too many things. Think perhaps the plan of Mr. ABORN may be a good one or else there should be ungraded schools for such as can attend school only irregularly and for a short time in which they can pursue those studies which will do them most good. Such pupils meet with very great discouragements in the graded schools and soon quit them entirely. This question is one needing attention as shown by the numerous tramps and criminals seen in some parts of our country.

Pres. FOLWELL:—We have had such an ungraded school in operation in Minneapolis for a year past and it works well.

This discussion having closed Prof. E. M. PENDLETON, University of Georgia read his paper on

WHAT ARE THE LEGITIMATE DUTIES OF AN AGRICULTURAL PROFESSOR?

Mr. President and Gentlemen.—In discussing the legitimate duties of an Agricultural Professor, we lay down this postulate: Agriculture should be taught as a science. Other propositions which grow out of this will be considered in connection with it, such as its negative,—Agriculture should not be taught as an art: and the Agricultural Professor should be an experimentalist, that he may substantiate doubtful truths and develop others from the arcana of nature.

We shall endeavor in the outset to find out, if possible, what the Congress of the United States expected of the Agricultural Colleges as established by their munificent donation of public lands, estimated to be worth six millions of dollars. If we can ascertain the reasons which influenced them, we have a foundation on which to build the logic of this question. Without entering into particulars, we simply state a few facts by which the distinguished gentleman from Vermont, who introduced the bill, succeeded in convincing Congress that these institutions were a necessity of the times. He showed from the statistics of the country that in one single decade (from 1840 to 1850) the wheat crop of the six New-England States had fallen off about 100 per cent and the potato crop about 60 per cent. That in the Southern and Western wheat-growing States, the decrease had been about the same as in New England; while the wheat crop in the State of New York from 1845 to 1860 had dwindled from thirteen to six millions of bushels. And so of the tobacco crop of Virginia, and the cotton crop of the Southern States. He further showed that as a consequence of this general deterioration of the soils of the country, while its population had increased 35 per cent in a decade, the meat-producing animals had only increased 20 per cent. The honorable gentleman could easily have shown that all of this deterioration was still going on under the most approved methods of culture where the progress of ages had culminated in the perfection of the art. Then the restoration of our soils to their primal fertility was the underlying object of the whole scheme; and, growing out of this as a necessary result, an increase of all the agricultural products of the country, to feed and clothe its inhabitants, and supply a surplus for the increasing demands of the old world.

The legitimate inference from these facts is that agriculture should be taught as a science, not as an art. Can we suppose for a moment that Congress intended to have laborers trained in these institutions to work on farms, or to be skilled in the mere art of agriculture, so that they should labor themselves or direct the labor of others? Far from it. Their object was to develop the first minds in the land as scientific agriculturists, who could do for America what Liebig had done for Germany, Boussingault for France, and Lawes for England. Yea much more than this, they wanted men educated here who could take up Agricultural Science where these men left it, and add to it from year to year by induction, until it occupied the pre-eminent position to which it is entitled in the eyes of the scientific world. In order to this, the Professor of Agriculture must not be a mere teacher, but an experimentalist also, as the science which he proposes to teach is inchoate, and there is much more to learn of it than there is to teach. We have but entered within the vestibule of this magnificent temple, and he who simply proposes to gather up the little taught by others and add nothing himself to the great store-house of human knowledge, is unworthy the position he occupies.

The truth is, the great mass of men who practice the Art of Agriculture are empirics and always will be. They only attempt to do what they see others succeed in doing, without reference to the whys and wherefores of the matter. Their knowledge is empirical, not scientific. The development of one truth by a scientist will, when applied by a few leading

minds, be adopted by the practical men of the country, who will not know or care to know anything of the science that is in it. Hence the prime object of our Agricultural Colleges should be to develop and elucidate science, which the masses may apply empirically; and not to teach men to be practitioners of the Art, much less to attempt the impossibility of making them all scientists.

In order to accomplish these great ends, means must be discovered by which our soils may not only be cultivated without exhaustion, but restored to their former fertility, and even beyond it; and that by a process which would at the same time remunerate those who cultivate them. The projectors of this scheme foresaw that simple art, however skilled, could never work out this great problem; that nothing but science could do it, under a combination of gifted minds, with all the aids afforded by liberal endowments to institutions set apart for this specific purpose. Then we hesitate not to affirm that whenever these institutions, or any of the Professors connected with them, magnify other studies to the detriment of these, or go outside of this curriculum for their teaching, they are outside the pale of their legitimate duties, and fail to compass the ends intended by the munificent donation of Congress. But how are we to learn and develop the truths of this complex science so as to be able to teach them to others? This can only be done by the establishment of experimental stations in connection with our Agricultural Colleges. How else could Agricultural Science be elucidated? How else could our soils be improved so as to produce remunerative crops? True, if we master what has been learned at the experimental stations in Europe, we can teach much of Agricultural Science in the abstract, and much that bears indirectly on our soils, climate, and products; but what would the Agricultural Professor in Georgia know about the habitudes of the cotton plant, the soils adapted to it, the fertilizers requisite for it, the diseases to which it is subject, or anything else about it of importance to the planter from the experimental stations of England or Germany? And so of many different products in every section of the country.

In order to accomplish these great results then, the Agricultural Professor has to be a student as well as a teacher, and we take it that the first great duty devolving upon him is to acquaint himself, by all the means in his power, with the soils, geological formations, agricultural products, and climatology of the State in which he is called to teach agriculture. For, however much he may be learned in the truths which apply to Agricultural Science, there is much that immediately surrounds him that general science can never teach.

But there is a great difference between an experimental farm intended to elucidate Agricultural Science, and a model farm to teach the appliances of the Agricultural Art through the labor of students. Our settled conviction is, that manual labor is not and cannot be made a legitimate part of a college course. The art of agriculture is very simple and may be learned much better by apprenticeship than in any other way. We want intellectual men taught at our colleges to be learned agriculturists, who will be able to tell others what to do, not to be mere day laborers themselves. Young men are not sent to military schools to learn to drill

as common soldiers, but to be commanders; and so we should teach our students, inspiring them with high thoughts of their profession, and teaching them that in agriculture as in everything else, knowledge is power and money too.

"For just experience tells in every soil,
That those that think must govern those that toil."

In Industrial Schools purely it might be well to teach the science of agriculture, and have a model farm to apply scientific truths by the labor of young men as a means to their education. But as far as our knowledge goes these manual-labor systems have failed. In connection with a University, where every pupil should be placed upon an equal footing, and where there is always a discrimination in favor of knowledge as against labor, the scheme is Utopian to the last degree. Here I am well satisfied that the higher truths of Agricultural Science should be taught the student, and let him go out into the world and reap the practical benefit from his own observations; just like the physician, who soon learns to apply the science when he begins to practice the art, and often has to unlearn what was taught him at clinical lectures in city hospitals, because the circumstances surrounding the broken-down, ill-fed patients were abnormal.

Baron Liebig has well said, "You must teach the Science of Agriculture as purely, that is, with as little reference to application as the science of geometry or trigonometry is taught." And he says further, "The agricultural department of a college without an experimental station is simply nonsense. The only method by which you can possibly advance and develop agriculture is by experiments; that is the only plan, for there is no branch of industry so completely built up by experiments as agriculture."

When an Agricultural Professor has succeeded in convincing his students and his confreres that agriculture is a science, of high order, not pure and unmixed like mathematics, but a comprehensive system of Natural Science, so complex that it is difficult to acquire; so profound that it challenges the homage of the most gifted minds, he has surmounted perhaps the greatest barrier to success. For the fact cannot be disguised that many are impressed, especially young and unthinking minds, with the idea that agriculture is hardly respectable enough to be introduced as a regular course in a college curriculum. Not only students, but learned Professors who teach from the musty tomes of classical lore handed down for ages, are apt to be impressed with the idea of their superiority over the man who has no higher calling than to teach the whys and wherefores of making bread and meat. Added to this fact all other teaching looks to the acquisition of some profession or pursuit in life, while it is a fact, up to this present hour, that agriculture is not an occupation to be sought for by students at college, or to be taught only by apprenticeship as an art, lower in the scale than the very simplest mechanical arts. Not respectable! Why, agriculture has to do with all three of the kingdoms of nature, the vegetable, the mineral, and the animal. It opens to the view of the admiring student the anatomy and physiology of plants. It unlocks the great storehouse of meteorology, "the treasures of the snow and hail; how

the light is parted which scattereth the east wind upon the earth, and the way of the lightning of thunder, to cause it to rain on the earth, to satisfy the desolate and waste ground, and to cause the bud of the tender herb to spring forth." It imparts a thorough knowledge of soils, geologically and agriculturally, the relations of heat and moisture to vegetable growth, the capillary and hygroscopic power of soils, both as to gases and fluids, their relations to all organic and inorganic substances existing in or above them. Intimately associated with this is the chemistry of the atmosphere, the relation of its oxygen, nitrogen, ozone, and carbonic acid to plant life. The chemistry of soils, the mineral and organic elements of plants, and their forms and combinations in soils and products, and growing out of this the great laws that govern vegetable nutrition, embracing a scientific knowledge of fertilizers and natural manures. It also teaches the laws that govern animal nutrition; how plants organize food from minerals and gases, converting them into carbo-hydrates, oils, and albuminoids, to develop the animal heat, fat, bone, and muscle of all domestic animals as well as of man himself. And then, it takes up special agricultural plants and field crops, peculiar to each State and every climate and soil, and tells of their botanical relations and habitudes, the diseases to which they are subject, and the insects which prey upon them, or upon each other for their benefit; thus opening up the relations of agriculture to the science of entomology.

All of these and many points not even touched upon here are embraced in a thorough course of scientific agriculture; so that he who teaches it must be a learned man, and he who learns it must be a hard student, and possess intellectual powers capable of grasping the most abstruse problems, and a wisdom to apply to economical uses what he has learned for the benefit of his fellow-man.

But we are met with the objection, where will so many scientists find employment, if we are not to teach men to do farm work at these institutions? From present indications it does not appear that there will be more to graduate with honor than will fill the high positions now offering on every hand to the learned agriculturist. Some are demanded as Editors of our Agricultural Journals, some as commissioners in our Agricultural bureaus, and others as professors in our Industrial colleges, while not a few will become the owners and directors of our large landed estates, or, having less means, head the squads on our smaller farms with strong arms and willing minds, by not only directing the labor and inculcating the principles they have been taught, but by setting the example of industry to their laborers, and thus become thrifty and independent. Out of more than two hundred students who have attended our course for the last four years, not more than three per cent could ever aspire to become eminent scientific agriculturists. A number of others will be able to make leading men in their neighborhoods, and disseminate many agricultural truths they have acquired, for the benefit of the masses; others not availing themselves of the golden opportunities offered them or from natural incapacity will have to be reduced to the ranks in some one of the vocations of life.

It may not be amiss to mention a few of the great problems to be worked

out in this department of experimental science, bearing directly upon the great question of food and clothing for the human race.

It is known that nitrogen is the only organic element exhausted from soils in its available forms, and needed to be applied for their restoration. It is known that this element constitutes four-fifths of the atmosphere, and all soils, even the most barren, contain enough of it within the depth of twelve inches to make several hundred crops. But because this element exists in unavailable forms, the product of the soil diminishes annually until the farmer has to turn them out to cultivate new lands, or buy nitrogen from the Pacific isles or the waste of our cities to restore his soils. The problem is, how may the nitrogen of the atmosphere be made to unite with oxygen or hydrogen, by some cheap process, so as to be made available as plant food, or how may the organic nitrogen of the soil existing so abundantly be thus changed to accomplish the same beneficent purpose.

Another problem in reference to the same element: It is known that the nitrogen which the cereals take up from the soil, is converted by plants into what we term albuminoids or flesh formers, and when eaten as food, is converted into flesh, which is constantly undergoing transformation; the food supplying new nitrogen, the muscles throwing off the old, which is carried out of the system in three forms, viz: urea, hippuric, and uric acids. It is further known that these substances readily decompose in a short time, the nitrogen uniting with the hydrogen, forming ammonia; which being volatile, unites with the carbonic acid of the atmosphere and escapes into the upper regions. The problem is, "How can these substances be saved and utilized economically for the use of man, and thus prevent a waste of millions of pounds of nitrogen from every city and farm-yard in the land?" Similar problems might be stated in reference to all the important minerals entering into plants, especially phosphoric acid, the first mineral element exhausted from soils, the sparest of all the important elements, the one needed most for the seeds of all plants and the one which, more readily than any other, passes into insoluble and unavailable forms; and so of potash, magnesia, iron, sulphur, and all plant constituents. There are questions of magnitude constantly rising, which it is expected of our Agricultural professors to solve for the benefit of the cultivators of the soil.

The great discovery of Liebig, that soluble bi-phosphate of lime was the special form needed by plants, has had more to do with the success of agriculture, both in England and America, than perhaps all others combined. Every superphosphate manufactory in the civilized world stands as a monument to his memory, and the capital invested in them, do perpetual homage to his genius.

In this connection, we can but notice how much is being saved annually by the cotton planters of the South from the recent improvements in Agricultural science, based upon this great discovery of Liebig's.

At our Experimental station, it has been established, that on the worn soils of Middle Georgia (Eozoic formation) the application of five dollars worth of nitrogen and phosphoric acid in available forms, will increase the production of cotton one hundred per cent, for three years, over the

natural soil, without a re-application; thus saving half the labor in the cultivation of this great staple. It is the application of such scientific truths to the soils of Georgia that enables her to compete successfully with the rich lands of the West in the production of cotton, and has placed her the highest, by odds, of all the States, in the purchase and use of fertilizers.

When it is remembered that agriculture is the basis of all human society, the sustenance of all human life; that without it the trade of the artisan, the navigator, the manufacturer, and every other profession and calling in life would utterly fail; that twelve hundred millions of human beings depend upon it for their daily sustenance; that nine-tenths of the fixed capital of all civilized people is embarked in it, and more than two hundred millions of men are daily laboring with brain and muscle in its interests, is it not wonderful that the learned and the great have been so slow to acknowledge its importance, and to provide means for the development of its truths, while millions are expended in other and less important systems of education, many of which result in as little real benefit to mankind as did the struggle of the alchemists for the philosopher's stone.

Having thus consumed the time allotted us in the presentation of our views on this important subject, we must close hoping that they may elicit from others a candid hearing, especially from those who, having pursued a different policy, have utterly failed of success. We feel safe in announcing to-day that these principles are working successfully, at least in one of the institutions of the country, and we doubt not will accomplish the same result in every instance, with men to enforce them who are equal to the emergency, and "in whose vocabulary there is no such word as fail."

Owing to the lateness of the hour, discussion on this subject was postponed and the following business transacted.

It was moved and carried that this Department meet to-morrow at the close of the morning session of the General Association instead of at three o'clock as to-day.

Mrs. E. S. CARR, chairman of committee on nomination of officers reported as follows:

For President, MANLY MILES, Illinois Industrial University.

For Vice-President, E. M. PENDLETON, University of Georgia.

For Secretary, CHAS. Y. LACY, University of Minnesota.

The meeting directed the secretary to cast the ballot for the above named officers, which was accordingly done and they were declared elected.

A resolution of thanks to Pres. THOMPSON for his ability and faithfulness as a presiding officer was then passed unanimously, the vote being put by Prof. MILES.

Pres. THOMPSON thanked the Department for its expression of appreciation and then surrendered the chair to Prof. MILES.

Prof. MILES on taking the chair thanked the Department for the honor conferred and congratulated it on the high degree of success already attending it.

The Department then adjourned to meet at the close of the session of the General Association to-morrow morning.

Third Day's Proceedings.

WEDNESDAY, JULY 12th, 1876.

Meeting called to order pursuant to adjournment at the close of the morning session of the General Association, and the order of the programme proceeded with.

Mr. C. B. STETSON of Boston, Mass., read his paper which was as follows:

DRAWING AS AN ELEMENT OF ADVANCED INDUSTRIAL EDUCATION.

The demand for advanced industrial education, which has grown rapidly of late years, must continue to grow for years to come, in every department of human industry. This is evident from the general tendency of civilization, from the fact that brain is counting for more and more, while brawn is counting for less and less, in nearly every kind of labor.—The construction of buildings, of machinery, of ships, and of bridges, the working of mines and the cultivation of the soil, and all the better class of manufactures call for a liberal education of its kind, no less than do law, medicine, and theology. The call, it may be repeated, is already urgent for large numbers possessing what may be vaguely termed advanced industrial education. What is this? The present paper proposes to discuss one of its chief elements.

Whether we consider the technical instruction required by men, or by women, for success in industrial pursuits, we shall find drawing to be the most essential single element of such instruction in all its grades,—the lowest and the highest. The truth of this assertion any one can substantiate for himself, by personal inquiries among the more intelligent of the men and women engaged in the different industries, and by reading the official reports of the various commissioners which have been appointed from time to time during the last twenty-five years, by European governments, to investigate the subject of technical instruction. It is true that a knowledge of chemistry, for example, will be found more essential in some employments than a knowledge of drawing; yet when the different employments are taken as a whole, it will be at once seen that

drawing must be conceded the first place in industrial or technical education. This might seem a reckless assertion, were it not fully sustained by the very extensive investigations which European governments have made, and whose results, having been published, may be read of all men.

Neither architecture, sculpture, nor painting, can get on without drawing. For only one of these—painting—is color an absolute essential.—Hence it is that architecture, sculpture, and painting are so frequently spoken of as the "arts of drawing."

Under architecture may be grouped, so far as general principles of drawing are concerned, all kinds of construction, apart from building, as machinery, locomotives, ships, bridges, fortifications, etc. For a like reason, under sculpture may be grouped stone-cutting for decorative purposes, wood-carving, varieties of metal-working, all ornament in relief, modelling for the purposes of pottery, glass manufactures, etc. And when color is employed for decorative purposes, as it must be upon a flat surface,—cloth, for instance, if to be decorated,—the color (except in case only an even tint is laid on) must conform to some pattern predetermined by drawing; and this, whether the color be applied in flat tints or according to the principles of chiaroscuro. Thus it happens that every object made by the hand of man, if its form is of any consequence, is indebted, with rare exceptions, to drawing, for its form, or its decoration, or for both.

Drawing not only expedites construction in all cases, but oftentimes construction is absolutely impossible without drawing. In order to the greatest expedition and economy, there must not only be professional draughtsmen to make the original drawings, but the workmen must know at least enough of the principles on which the drawings are made, to be able to work from them understandingly and without constant supervision.

What has just been said of drawing refers to it only as a help in construction, regardless of whether the object made be beautiful or ugly.—Now, there is no one who does not prefer the beautiful to the ugly, or what he thinks to be beautiful to what he thinks to be ugly. Beauty has a commercial value which cannot be easily overrated. Instruction for industrial purposes must, therefore, aim to cultivate the taste as it applies both to the form of the object and to its decoration. Though the latter adds nothing directly to the usefulness of an object, yet it often adds so much to its market value that almost everything now made receives more or less of ornament. The taste can be better developed by means of drawing than by any other one thing.

A refined and intelligent taste in respect of objects that appeal to the eye is next to impossible without some knowledge of drawing. One may like or dislike, but little more. There should be good taste, it may be observed, on the part of the consumer as well as producer. Indeed, it is a truism that the taste shown in the manufactures of a country never rises, except in special cases and for special reasons, above the taste of the people,—of the home consumers.

But what is drawing? Is it something fixed and determinate, or something vague and nebulous, which each may define to suit himself? One

may well be excused for asking such questions in this country, where he finds such divergent views held by persons who, having but slightly examined the subject and got a glimpse of one of its many aspects, nevertheless think they know all about it.

Drawing, when regarded in both its artistic and industrial applications, resembles mathematics in comprehensiveness. It would be quite as reasonable for a person who had mastered arithmetic only to claim that he knew all about mathematics and its applications, as for a person who had learned to draw from the solid only to claim that he knew all about drawing. From nothing else does drawing suffer so much in this country, and will continue to suffer so much the next ten years, as from the very narrow views held by so many persons who think they understand all about its scope, its practical and artistic applications, and its value as an educational discipline. It is to these persons that large numbers, who know nothing about drawing, look for leadership. When the blind lead the blind, there should be no ditches in the path; but in dealing with instruction in drawing, one has special need of good vision. There are dangerous pitfalls on all hands.

Let us consider some of the general characteristics of drawing. With these the details, which are too numerous to be considered on the present occasion, must all harmonize.

One of the first things which should be noticed is the great fact that all varieties of drawing may be reduced to two classes: representation of only two dimensions—length and breadth; and representation of the three dimensions—length, breadth, and thickness. A clear understanding of the general difference between these two things will help one greatly towards a clear comprehension of the whole subject.

When only two dimensions are drawn, there can be no representation of thickness, of relief, of solidity. Consequently all perspective effects, all light and shade, and all color, when applied according to the principles of chiaroscuro, are out of the question. No devices for suggesting solidity, for the purpose of carrying the eye below the surface of the paper, are properly in order. Lights and darks may be indicated by half-tint, or flat tints, showing that the surface is raised or depressed in parts; and colors may be applied in flat tints, as is usually done for the decoration of woven fabrics, or flat walls and ceilings, and even in the representation of the human figure in stained-glass windows. In a word, when only two dimensions are drawn, all true pictorial effects, everything of the nature of chiaroscuro, are among the impossibilities. Hence the drawing of two dimensions, compared with the drawing of the three dimensions, is a very simple affair; yet it is of almost endless application in the different industries.

It takes for its basis the figures and problems of plane geometry and their applications. Construction of every kind,—building, machinery, furniture, sail-making, and so forth,—requires a knowledge of such drawing. It is also in connection with the drawing of two dimensions that nearly all the principles of design, applied in determining the forms of objects, or their decoration, are best learned. Not only what should be the due proportions of objects, and what the principles to be observed in

flat ornament, when only lines and conventionalized forms are used, but many of the principles which good taste require to be observed in relief decorations, can be taught in this connection. And right here it is that instruction in the great decorative styles of different ages and nations properly begins. Classic art can no more be neglected than classic literature.

When only two dimensions are represented, it is evident that flat copies, like prints, are the proper things; indeed they are often the only copies which are possible. Even when relief copies are used, they must be treated as though they were flat. The copies should be of the very best, since the development of the taste for the beautiful in the outline and proportion of objects and in their decoration, is one of the prime ends to be sought in this kind of drawing. But the learner should, by no means, be limited to drawing from copies; he should be often exercised in the production of original designs, both for objects and for ornament. He thus requires facility in making intelligent applications of whatever principles he may have learned, and learns to draw and to design at the same time. Indeed, original design is the best proof that one understands the principles of design, as original composition is the best proof that one understands the principles of grammar and rhetoric.

The very great industrial value of drawing two dimensions has now been shown in a general way. Its educational value is also very great. Yet there are not a few persons, who, regarding themselves as specially wise in matters which pertain to drawing, cry down all drawing that does not carry the eye below the surface of the paper,—that does not represent the three dimensions.

When we come to representing the three dimensions,—length, breadth, and thickness,—then perspective and all the other effects of chiaroscuro are in order, or not, according as we desire simply a pictorial result, an end in itself, or to make a drawing for the guidance of workmen. Here it will be well to make a note of the decided difference between the two modes of representing solidity for the two purposes named.

When the three dimensions are represented for artistic or pictorial purposes, the drawings are made from actual objects, or else imaginary objects are drawn as though they were actually in existence and before the eye. In neither case can the drawings be used for the purposes of construction, except in merely an incidental way. Drawing from the solid is only indirectly of service in the industries, but that indirect service is very great.

When the three dimensions are represented for the guidance of the artisan, the drawings, instead of representing what already exists, represent an object which is to be made. That the object may be made from the drawings, they must represent its inside as well as its outside, its rear as well as its front. The object must be shown in parts, and not as a whole, and each part must be drawn to a scale. Of course there can be no perspective,—none of the effects of chiaroscuro.

Such being the radical difference between the two modes of representing solidity,—the one for a pictorial, the other for an industrial purpose, —that it is not a little astonishing to find persons, even in this country

where ignorance of drawing is so great, who hold that, even for industrial purposes, drawing from the solid, with all the difficulties of chiaroscuro, is the kind of drawing which should be specially taught in the public schools. In their opinion all other kinds of drawing may be safely ignored, or should at most receive but slight consideration. For a moment contrast this opinion with the lesson taught by the Centennial Exposition. If you examine all the manufactured products there displayed, you will not find one that was made from a perspective drawing. Some of the more elaborate decoration, however, will show effects of chiaroscuro that can be learned only by drawing from the solid and from natural objects.

Drawing from the solid, as a part of advanced technical or industrial education, must by no means be ignored. It affords an admirable discipline for the hand and eye; it trains the imagination to realize solid form in space; it increases the sensibility for delicate gradations of light and shade; and so it must always be regarded as an essential element of technical as well as purely artistic education. It is only necessary to see that it occupies its legitimate place. A word as to the general course which instruction in this kind of drawing should take.

The work should begin with the simple forms of solid geometry, the circular being drawn before the plane-sided, as the former present less difficulties than the latter. It is an absurdity of which many are guilty, to base the drawing of circular solids and objects upon the drawing of the more complicated plane-sided ones. After the geometrical solids, objects of corresponding shapes are logically in order; these to be followed by ornament in relief, and by casts of natural forms and of the human figure; the course to conclude with drawing from nature and from the living figure. The first aim should be to represent the objects in perspective outline,—the literal form. When this has been mastered, light and shade can be properly added; and then a steady light must be had, as when it is admitted into a room only from the north or northeast.

Some object vehemently to the use of flat or printed copies in this kind of drawing. Of course the only genuine object-drawing is drawing from the solid itself. But it does not require much pedagogical acumen to discover that flat copies, supplementing the solids, can be made greatly to facilitate progress at the outset. Both the printed copies and the objects should be as beautiful as possible, in order that the taste of the student may be elevated while he is learning to draw.

It will be well here to observe that there is a kind of drawing executed entirely with instruments, which is called linear perspective, and sometimes simply perspective, as it is the only drawing that conforms literally to the meaning of that word. This kind of drawing is often employed, even by those who regard themselves as experts, to explain the principles to be observed in drawing from the round or the solid. But only confusion results from thus mixing the two methods, since they have so little in common,—since they differ both in principles and in aims. Linear perspective is employed to a limited extent by artists, but is chiefly used by industrial draughtsmen. It is the only means by which the architect, for example, can make from his working-drawings, a pictorial rep-

resentation that will show, with a near approach to the truth, and in advance of construction, how a building will look when completed. It must, therefore, be regarded as an element of advanced technical instruction.

There are two methods, sometimes called the direct and indirect, of making perspective representations from working-drawings. The processes of the former are the easiest of explanation, at least for one who already has some knowledge of orthographic projection, but are not always the easiest in application.

As to the representations of the three dimensions, without pictorial effects, by plans, elevations, sections, etc., for the guidance of workmen, only a word more need be said. Descriptive geometry, or orthographic projection, forms the basis of this kind of drawing, which begins with the varied representations that may be made of geometrical solids, and then proceeds to practical applications in the different industries of the principles thus demonstrated. The same general principles of representation are involved in drawings for all kinds of constructive purposes, so that when they have been learned for one they have been learned for all, and these principles are derived from geometry. Indeed, *geometry, in some form*, should be recognized as the true basis of every variety of drawing, whether industrial or artistic.

Since drawings of objects to be constructed represent them in parts and without pictorial effects, they consequently make a special demand upon the imagination. Not only the draughtsman who prepares such drawings, but the workman who receives them for his guidance, must make from them, by an effort of the imagination, a vivid mental picture of the object required. Hence, the ability to "see in space," as it is often called, to realize form by an intellectual effort, becomes a matter of decided importance in technical education. And hence the imagination should be well trained both by drawing from the actual solid, and by representing the three dimensions orthographically. For the purposes of instruction in the latter case, flat copies must be the chief reliance; but these need to be supplemented by corresponding solids to assist the first efforts of the callow imagination.

Let it be noted that the sculptor and the painter need the very power which the mechanical draughtsman requires, of realizing form in space by an effort of the imagination. And so instruction good for the latter cannot be, as some so loudly protest, injurious for the former. They have, at least, this most important use of the imagination in common. It is quite as rare a thing to find a mechanical draughtsman with an imagination equal to all the requirements of machine drawing, as to find a sculptor equal to all similar requirements of his art. A good course in orthographic projection would help any artist, while it is an absolute essential of advanced technical education.

There is another mode, a very simple one, which is sometimes employed in certain cases to represent the three dimensions for constructive purposes. This is isometric projection, which combines plan and elevation in one drawing, and affords an interior view when required. A working-drawing and, in a certain sense, a picture at the same time.

Just a word now about the materials employed as vehicles of express-

ion, and to which we are indebted for terms designating different varieties of drawing, as instrumental drawing, point drawing, crayon drawing, stump drawing, charcoal drawing. For the purposes of advanced technical education, the hand ought to be accustomed to the use of different materials. Change of material does not necessarily involve change of work; for whatever materials may be used, the student must work according to certain broad, underlying principles, found, when properly sought, in one or other of the great departments of drawing which have been described, and are, in brief, as follows:

1. Drawing two dimensions. Freehand and instrumental. For decoration, for designing the forms of many objects, and for mechanical purposes.

2. Drawing the three dimensions from the solid or round. Effects of chiaroscuro. Freehand. For both artists and artisans, but especially for the former.

3. Drawing the three dimensions, with perspective effects, of objects to be constructed. Instrumental. Not to be confounded with drawing from the solid. For both artistic and mechanical purposes, but especially for the latter.

4. Drawing the three dimensions of objects to be constructed; no chiaroscuro, but orthographic representation to a scale. Instrumental. For artisans.

And so it may very properly be said of drawing, that it rests on a broad basis of definite principles, and that its applications are infinite. It is the universal language of form. The foreigner who understands this language can, upon entering any first-class American workshop, go at once intelligently about his work, while an American ignorant of it would have to be directed at every step. This language, of such vast scope, is not to be learned in a day. No mere trick, no mere device or universal patent recipe can put one in possession of this hundred-handed instrument of art and industry. Therefore beware of drawing-quacks.

If we examine the curriculum of any good school for advanced technical instruction, we find that drawing occupies a large space. This is for the civil engineer, for the architect, for the shipbuilder, for the machine draughtsman, for the designer of manufactures, for the decorator, for the founder, for the miner, for the farmer, for almost every human industry. Some industries require more, others less of drawing; and it goes without saying that each industry must have its special requirements, though there are certain things that belong to them all in common. In the best technical schools there is no haste to reduce the instruction to a rigid specialty in the case of any student. When workmen are to be instructed, the course must be somewhat different.

Experience has shown that he succeeds best in any particular kind of drawing who has been instructed in all kinds. Thus the knowledge of the architect, for example, should not be limited to the requirements of construction; he should know how to decorate; he should be able to give his perspective drawings an agreeable background of sky and earth, with animal and human figures. The designer for pottery or textile fabrics will do his own work better, when his knowledge of the art of design is comprehensive enough to make him intelligent in furniture and the groupings of figures in a picture. But it is not necessary to enlarge on this point.

As drawing, like everything else, has its elements which can be learned in childhood and early youth, these elements should not cumber the curriculum of the technical or advanced industrial schools, but, like those of arithmetic and grammar, should be made a requisite for admission to the technical schools. Were such the case, *there would be saved certainly one year of the time* which the student is now obliged to spend in a good technical school. The course could be shortened by that much, or, better yet, the standard of instruction could be raised.

When the public schools do their duty by drawing, this advance on the part of the technical schools can be readily made; for then their students will come to them well-grounded in all the elements of drawing. They will have their eyes trained to quick and accurate perception, and their hands to quick and accurate execution with or without instruments.—They will possess no mean knowledge of the true nature of design and decoration. With the universal principles to be observed, when one represents objects in chiaroscuro, they will be familiar; and also with those general principles and methods of representing the three dimensions orthographically which are employed in every variety of mechanical construction. From all this there will come, in addition to the definite knowledge and manual skill, much culture of the taste, imagination, and inventive faculties. It should be remembered that drawing is *more a matter of knowledge than of mere dexterity*, and that an exhibition of drawings is to be judged more by the knowledge it displays than by fineness of execution.

General culture and general utility afford ample justification for teaching in the public schools all that has just been enumerated. This forms the soil from which technical instruction springs, but is not technical instruction itself, as it does not embrace specific applications in the different industries. It is for common service; and as the pupils in the public schools study language in some form, and mathematics in some form, from the beginning to the end of their course, so should they, in the same continuous manner, study drawing and art. That this may be done, without diminishing the proficiency of the learner in the old school studies, has been abundantly proved by experience.

As to the details of a suitable course of instruction in drawing, either for public schools or technical schools, nothing will be said here. Those who wish to know these details should visit and study the Centennial Exposition. Nearly all the products there shown illustrate, in one way or another, the practical applications of drawing. Let these products be studied until one realizes how much a knowledge of drawing must have contributed to the result. Then let the educational curriculums shown in the Exposition be carefully examined. Finally, let the products and the curriculums be compared. This curriculum provides for such instruction in drawing. Is it sufficient to yield the products displayed in the Exposition? No. Then it is not sufficient for public and technical schools, since it is not a measure of the Exposition. But another curriculum provides for such instruction in drawing. This is equal to the requirements of the Exposition, is a measure of the Exposition, and so is *equal to the* requirements of the school. Nothing less will fill the bill.

A study of the Exposition will show that Russia probably exhibits a better system of technical instruction than does any other country. She has not yet results sufficient to illustrate it. But the system is a full measure of the Exposition. The exhibit made by Massachusetts, of work actually done in her public and technical schools, is unequaled by any other exhibit. For every feature of the Exposition, industrial or purely æsthetic, her educational display shows a corresponding feature. Especially does she deserve the palm for what she has achieved in the way of drawing in her public schools, during the last four years. And let it be observed that what she has done, not only for drawing, but for music also, in the public schools, has not been at the expense of other branches, as the results show. The educational exhibits made by Sweden, Belgium, the Normal Art School of South Kensington, by Switzerland, Holland, and some others, will well repay him who is in search of light on the subject of technical or advanced industrial instruction.

Materials, as well as plans and results, should be carefully examined. Much the most extensive and meritorious display of materials for instruction in drawing is made by L. Prang & Co., of Boston. They exhibit materials for all grades of pupils, from the lowest primary to normal art and technical schools. These materials consist of flat copies, manuals, models, casts, etc., to be drawn in line, in light and shade, and in colors, and all systematically graded. European governments regard good drawing materials of so great consequence that they make it a part of their official business to see that the very best are provided for the use of schools. But such a thing cannot be in this country. How fortunate, therefore, are we, in finding a business house, like that of Prang & Co., with sufficient means, enterprise, and intelligence to provide for American schools drawing materials so excellent as to command the approval of European experts.

The necessity of drawing as an element of advanced industrial education has now been described in general terms; and a sketch has been given of the leading features by which all sound instruction in drawing must be characterized. This instruction should begin in the public schools, with those elements which are of universal utility, and be completed in technical schools, with those special applications required by the different industries. When drawing receives, as it must ere long, its due consideration in this country, it will work a great and beneficial revolution,—much greater than appears upon the surface,—in public instruction and in the condition of labor.

Following the paper of Mr. Stetson Prof. S. EDWARD WARREN, formerly of Troy Polytechnic Institute, made some remarks which are embodied in the following from his hand:

REQUIRED ADJUSTMENTS IN SCIENTIFIC EDUCATION, WITH ESPECIAL REFERENCE TO INSTRUMENTAL DRAWING AS ONE OF ITS ELEMENTS.

By means of the uniformity of educational nomenclature, which is not the least of many good things which may be most quickly and permanently established by means of a central Bureau of Education, the successive grades, comprehensively designated as Elementary, Secondary, Superior, and Professional Education, are getting to be more and more generally and intelligently recognized.

Elementary education, with sub-divisions not necessary to mention here, is that given in all schools preceding High Schools and Academies.

Secondary education is that found in the latter institutions, and in those styled preparatory.

Superior education is that afforded by Colleges and Universities. Here we distinguish the College as having a wholly or nearly prescribed course, and the University as an institution where any subject chosen by the student can be pursued to any desired extent. Moreover, in colleges and universities, as thus defined, knowledge is sought for its own sake, that is with but indirect if any reference to economic ends.

Professional education is that which fits one for the practice of a calling, and is either rational, or empirical. The latter gives only facts and rules; the former, their explanation also, so far as practicable.

The Academy, or High School, has this in common with the College, that, in both, the course of study is mainly or wholly prescribed, and is pursued with immediate reference to mental discipline, at least by those pupils who are candidates for admission to higher institutions. The College has the same end also in common with the University; this gaining of mental power to be afterwards made available by the student as a man among men, a force of being acting on his fellows and his time.

But, on the other hand, the University is adapted to maturer minds than those of college classes, while, again, the High School and Academy, being the final school of many of their pupils, must fit these for such forms of practical life as they are to enter, and must therefore, though on a lower plane, possess something of the character of professional schools.

Proceeding now, not ideally, but agreeably with what actually is; students, after passing the age at which mental and practical tastes manifest themselves, may be divided thus: First: Students of Man and his activities, of mind, philosophy, history, and society; and of the pursuits founded upon such study, Theology, Law, Literary Authorship, Teaching, etc. Second: Students of Nature, of mathematics, physics, geography, in the broad sense, including both the surface and substance of the earth, and natural history; and of the pursuits founded upon these, Engineering, Architecture, Applied Physics, Mining, etc.

Not that each of these classes is totally distinct. Each should know something, at least in a general way, of the subjects which principally absorb the attention of the other. Thus the unity, in variety, of life is maintained.

Still, these two classes are so far distinct, that parallel systems of schools,

adapted to each, shape themselves into being, as if spontaneously; showing, by the way, as in many other things, that man's abstract schemes, systems, and services, are but his systematic records of what already was before he became conscious of it, and are not his absolute creations.

The manifestations of individual tastes and life-purposes, already alluded to, generally appear on entering, or while in the stage of education called secondary. Hence elementary education is common to all, but beyond that, there should be, and in fact is, though in a partly mixed and undeveloped condition, the two parallel lines of schools, which may properly be called, the one *humanistic*, or, more popularly, classical and literary; and *naturalistic*, more popularly termed scientific and practical. That is, wherever a High School or Academy has a separate "Scientific course," with a section of students actually pursuing it, or wherever a College has the same, not professional, but with science, both mathematical and physical, studied for its own sake, there the two parallel systems are actually established. So far as the two systems are found in separate and distinct organizations, as in the case of existing academies, wholly devoted to preparation for classical colleges; and, again, in academies, wholly devoted, as a few are, I believe, to preparation for the higher scientific schools, the distinct systems are visibly and organically separate, though by no means antagonistic. And in the professional stage, the separation is everywhere complete, the schools of Law, and other humanistic professions, being ever separate from those of Engineering and other naturalistic ones.

Finally, I repeat, by reason of its vast importance in discountenancing all mental, moral, social, educational or industrial antagonisms in the community, that, so far as time permits, general physics, chemistry, geology, and natural history, or parts of them, should be studied in the humanistic schools, while something of mental and moral philosophy, polite literature, and elocution should be likewise taught in all grades of naturalistic schools.

Coming now to the proposed question of adjustments, how shall we shape it in general? Practically, the modern professionally scientific, or polytechnic school, on coming into existence, must begin with such students as it can get, that is such as secondary education can furnish, since the classical college has no direct relation to it. Also, quite a number of such schools, coming to exist, preparatory schools will spring up, organized with direct reference to placing themselves in line with the professional ones, and meeting the gradually-increasing requirements for admission by the latter. Still, so much having come to pass by the method of action and reaction, or mutual adaptation, the question, as it would seem, should be settled thus. The Polytechnic School, being the highest of its series, that is, not compelled to adapt itself to a succeeding institution, is so far free to shape itself according to an ideal, and should aim and strive to do so; and then the successive lower schools should shape themselves to this.

Working then from the top down, according to the conclusion just reached, we find, first, that there are now about seventy-five scientific professional schools in the United States. These are of various degrees

of development, from those with a course of two years, to those with one of four years, beginning, too, it may be, in the latter case, with older and better prepared students than in the former. They are also of various complexity of organization, from those which, believing in doing one thing and doing it well, give one single well-composed course, leading to one degree, giving to all their students alike, to those which complicate their work by a large number of courses in one undivided organization. They are also, though all alike in general character and aims, variously named, "Scientific Schools," "Schools of Technology," "Polytechnical Schools," or "Institutes," and, in the case of the government land-grant institutions, "Agricultural and Mechanical Colleges."

But passing by all this, as well as the general organization of such schools, we come at once to the special reference to graphical science which this paper proposes, and find two important adjustments needed.

FIRST. In every one of the polytechnic schools, as I will henceforth call them, however they may be actually named, the graphical department should, to accord with the character of the school as distinctly professional, consist principally of an extended and varied series of complete professional drawings of Structures and Machines of every kind and material, roofs, bridges, earth and masonry works, etc., and in projection, and perspective, whole and in detail; also buildings, or mines, and their accessories, according to the particular aims of the school; the whole accompanied and supplemented by such special and higher problems in Descriptive Geometry, Shadows and Perspective, as might be necessary to the thoroughly-intelligent working out of such drawings, and as might therefore be more appreciatively learned in immediate connection with their visible applications. This department, thus composed, should then be deemed and made the sufficient work of a separate chair of instruction.

SECOND. Engineering and other like schools, correspondingly elevated in all their departments, should be in a position to require not only the elements of instrumental drawing—its theory and practice—for admission, but the elements of Descriptive Geometry, Shadows and Perspective as well.

But this is confessedly in the more distant future, though it is surely coming. Taking the score or so of our now most fully developed polytechnic schools, each of which has a course of three or four years, and, as a general rule, looks to Academies and High-Schools for its students, the following adjustments are needed:

FIRST. By united effort, in conjunction with a score or more of the best preparatory schools, it should be possible soon to include the element of the theory and practice of instrumental drawing among the requirements for admission. The five usual requirements, at present, are a certain amount of arithmetic, algebra, geometry, geography and English. Some succeed in adding a little French, or possibly other subjects, as United States History, or elementary trigonometry. Now the requirement of the amount of drawing here proposed, would secure the following advantages. First, the benefit of the study, which is as useful to

those whose schooling ends with the Academy or High School, as are the other studies there pursued by them. Second, equality of distribution of studies, since it is as elementary in grade as are the grades of arithmetic, algebra, geometry, history, geography, grammar, physics, etc., taught in High Schools and Academies. Its legitimate place is therefore in these schools, since all studies of like grade should obviously be in the same school; while to place the very beginnings of this one, along with advanced grades of all others, in the polytechnic schools, as has hitherto been done, at once creates a fault, a break in the uniformity of gradation. And if we ask, "Why is this thus?" the answer must be, for lack of qualified teachers, and in addition to possible self-instruction, and the partial employment of graduates of polytechnic schools to initiate this desirable reform. Normal Schools should take up the subject, at least so far as to train a section of students having aptitudes and fondness for the subject, until everywhere it should be possible to teach the elements of instrumental, and plan, and elevation drawing in preparatory schools. But to return. Third, the valuable time, thus gained to the department of instrumental drawing, could, in behalf of higher scientific scholarship, and better equipment for professional work, be most profitably employed in developing that department far more fully than it generally is at present.—This leads us to the other desired adjustment—*Second.* The department of higher graphical theory and practice should be expanded in all the polytechnic schools into the sufficient work of a separate chair of instruction, instead of being, as now too often, only a component of the complex work of another chair. There is abundant European, and some long continued and satisfactory American precedent for this; worthy of being followed, aside from the pure merits of the question. Let us then inquire how it has happened that so few of our American scientific schools thus have a separate department of Descriptive Geometry and its applications. We shall find in the results of such inquiries a more adequate conception of the question, and of the proper disposition of it. First, then, professional scientific education, as distinguished from the comparatively aimless study—in a practical point of view—of the elements of pure mathematics, and general physical science in colleges, is so recent in this country, and, until quite lately, limited to so few places, that there has been, and probably still is, much of both vague and inadequate conception of what the components of an engineering education are. Probably the most usual misconception, especially among preparatory students, and the ordinary classes in the community, is that of confounding engineering with surveying, or with field operations with engineering instruments; whereas these operations have only the kind of relation to the real substance of engineering that the taking of your measure by the tailor has to the completed fine coat. For, engineering is the designing and execution of works, in which the helpful materials and forces provided to our hand by the abounding goodness of God are employed and directed for the use and benefit of man. The bare mention of some of these works, the East River Bridge, the St. Louis Bridge, the Great Eastern, is sufficient to show that much more than to read the angle on a transit, or the feet on a levelling rod, is necessary to constitute an engineer. In fact, the central and

main resource in such design and execution is the science of MECHANICS, in its three successive stages, rational, physical, technical. Rational mechanics is the science of pure forces, and requires a large knowledge of higher mathematics for its extended study. Physical mechanics is the science of forces as effected by the properties and conditions of matter, such as elasticity, rigidity, friction, and solidity, liquidity, etc. Technical mechanics, finally, is the science of forces, acting in this specific form, kind, and position of matter, *this* iron bridge, over *this* stream, its sufficiency, and equal and economical sufficiency in all its parts.

But, clustering around this vast and grand subject of mechanics, sister of astronomy, which, indeed, in its mathematical portion is, what it has been called, celestial mechanics—around mechanics, I say, and essential to its efficient practical use, are physics, or the science of the general properties of matter, with the subtle agencies of light, heat, and electricity; chemistry and geology, in their relations to the preparation, properties, and durability of the materials used in construction. Then follow the geodetical and graphical sciences. The first or higher geometry, applied to the accurate determination of the forms and measures of terrestial surfaces, under all conditions of accessibility; and of every form and kind of artificial work erected thereon. The second, or graphical science, consists in the following of solid form in all its possible intricacies of design and combination, with a flexible power of exact representation which nothing can escape. This is Descriptive Geometry, the beautiful science which teaches how to represent on flat paper the forms in space conceived by the engineer, and governed in their dimensions by the laws of mechanics. Engineering design is the thought of the engineer, and mathematical drawing is the language of this design as spoken language is of abstract thought. Hence *Olivier*, its greatest master, perhaps, beautifully as well as appropriately speaks of the learning of Descriptive Geometry, that is, the learning to express the mental design by the flat drawing, and to see the object in the drawing, as learning to read and write the graphic language.

Seven grand subjects are thus the essentials of an engineer's knowledge; Mathematics, the fundamental one, Mechanics, the central and principal one, then Physics, Chemistry, Geology, Geodesy and Descriptive Geometry with its applications, to which in the fullest development of engineering study might be added, eighth, Construction, or the methods pursued in the actual erection of works, that is executive engineering.

After these statements, which must commend themselves to common sense, it must be obvious, first, that all this is essential to an engineer, but, second, that it could not all be suitably taught by one man, hence, third, that the unfortunately prevalent designation, "Professor of Engineering," is, in itself, a peculiarly unintelligible misnomer, chiefly significant either of the extent of popular misapprehension of what engineering education really is, or of the extent to which school nomenclature humors this misapprehension, or he represents the concentration of an epitome of the whole in one chair; and hence, fourth, that the contrasted term "Faculty of Engineering," applied to a proper teaching body of six or eight Professors, is as appropriate as the corresponding designations, "*Faculty* of Theology," "Faculty of Law," etc.

But, once more, if it is not as readily and generally perceived that Descriptive Geometry with its applications, is as well deserving of assignment to a separate chair of instruction as are any of the other subjects of engineering study, it is because it, as one of the most recently recognized separate sciences, and as of foreign origin, is the least familiar, even to educated thought, of all the group. But, in place of the very dry and tedious operation of explaining the equal fitness of this subject with others, for erection into a separate department, by means of a detailed exhibition of its contents, I will take what will be, for present purposes, the sufficient one of a reference to existing works on the subject, and to experience. Several of the great French masters of the subject have found it sufficient to engage them for much or all of their lives, and have produced quartos, or even a series of them upon portions of the whole field, while, in my own practice in this department for a large part of the long time spent in the old pioneer polytechnic school of America, the Rensselaer Polytechnic Institute at Troy, N. Y., its duties were abundant to keep me busy through each and all of the eight semi-annual sessions of a four years' course; and this, too, without a question ever being raised as to any disproportionate development of this, as compared with other departments, proper to a school of engineering. This also is visibly illustrated by the embodiment of the work of the department in the ten successive volumes which I have been permitted to put forth as my contribution to the advancement of our American Polytechnic Schools in one of their departments.

I feel therefore well supported in ending as I began, that a very desirable adjustment of our American polytechnic schools as they now are, is an early development of the subject of Graphical Theory and Practice into a separate department in all of them.

Leaving now the polytechnic schools, and coming to colleges, the radical difficulty is that the two classes of institutions are quite out of line with each other, out of actual practical relations with each other. The reason of this is, that so many of our older and better polytechnic schools got well agoing before many or any of the colleges set up alternative courses in general science and modern languages and literature, parallel with their classical ones; that the habit of looking to Academies and High Schools for candidates for admission, became too firmly established to be readily changed; while also the old college training, too often skipped, even by candidates for the old, or so-called learned professions, had no obvious preparatory relation whatever to the polytechnic schools.

The great and general adjustment needed here is, therefore, that by conferences among educators, and by all other suitable means the scientific courses, in colleges possessing them, should wheel into line with the lower and higher stages of scientific study, taking their place between the preceding science classes in academies and high schools, and the succeeding polytechnic schools.

Another, and valuable adjustment would then be, that the work of the latter could be shortened, probably to two years, as in the case of many other professional schools, and, at the same time elevated, by the introduction, more than at present, of lectures by experts, on higher and

recent professional practice. With these adjustments, would follow a third, viz., that the general, that is, not strictly professional work of the polytechnic schools, would find its place in the colleges of general science and modern languages, or in the "scientific courses" of our otherwise classical colleges.

Finally, on this head, and relative to the department particularly considered, I must of necessity illustrate the distribution of its subjects, consequent on the foregoing adjustments, by reference to my own published volumes as being the only essentially complete series in English. This series of ten volumes, existing first in two grades, of five each, elementary and higher, and the latter in two portions, theoretical and practical—the elementary works, that is, their subjects, by whomsoever treated, should, and would, as fast as qualified teachers could be found, fall into academies and high schools; the general problems of Descriptive Geometry, Shades and Shadows, and Perspective, would then readily find their place in the science colleges, or college scientific courses, leaving only the professional subjects, Machine description and drawing, Structure-drawing, and Stone-Cutting, to the polytechnic schools.

This arrangement, ideally so simple and practicable, as well as desirable, viz., the continuous progress of the student through three successive schools, the science academy, the science college, and the polytechnic school, would tend to dignify, elevate, and improve the membership of the scientific professions, by thoroughness in their specialties, as well as by the culture, so immensely important for every educated man, in the subjects that fit him for intelligent and virtuous citizenship, that is, in the elements of Psychology, Ethics, Political Economy, and Literature.

This arrangement would doubtless, also, and that speedily, be of great mutual benefit to the scientific collegiate courses, and to the polytechnic schools. So long, and so far as the general scientific studies now given by the former, are duplicated by the latter, there is a superfluity, and as the students of the latter, are very rarely the graduates of the former, or, indeed, of any college course, there is, in the college scientific courses, a comparative aimlessness, which results, as might be expected, in a small number of students in such courses, as catalogues show. But, with point, aim, and purpose given to the college general scientific courses, by making them immediately preparatory to a higher order of more purely professional polytechnic schools than now exists, students would be attracted to them, and thus sent in increasing numbers, as well as with better general and special preparation, to the polytechnic schools.

Let us then labor in hope, not that things now non-existent, but that things already existing, and only needing to be suitably brought together, shall, before the close of the first decade of a new century, be set in their proper relative position, to the great advancement both of professional education, and of well-educated scientific citizenships.

Finally; we reach the first and preparatory grade of institutions necessary to be considered, viz., high schools and academies. Nearly or quite the only adjustment needed in them, except, perhaps their formal separation into distinct organizations in cities and large towns, has been foreshadowed all along. That is, the elementary stage of the general de-

partment of instrumental graphics, should be taught in all of them, so far as they are wholly or partly engaged in preparing candidates for higher scientific study, or for graduation into any of the many mechanical industries of common life. Teachers already in these schools, should soon qualify themselves in these subjects by self-instruction, which is often practicable, or by brief attendance as special students of the graphical work of the polytechnic schools, or institutions like the Cooper Institute, or on summer schools organized for the purpose.

But, in high schools and academies, we enter the field of secondary education, where we encounter the many and various card or copy-book school systems of so-called industrial art drawing, which are everywhere so persistently pressed upon public attention, and it may naturally be asked, what relation has this drawing to that whose normal distribution in the scientific portion of the general educational system of the country, I have been advocating?

Let it be known then, that drawing, exclusive of fine art, exists in two grand divisions; *free-hand*, or that done without instruments in aid of the ornamental design and decoration of forms and flat surfaces; and instrumental, the kind of which I have spoken, and which has a bearing on the whole vast and wide-spread exact or mechanical industries of the country, and also on the higher scientific professions, in the way, and to the extent, which I have already shown.

The two divisions of the entire field are thus to a great extent independent of each other, of equal importance, and of equally-wide demand. Industrial design, or industrial art drawing is probably more required for surface decoration than for anything else, and most of all perhaps by designers of patterns for textile fabrics, prints, carpets, laces, shawls, oil cloths, table covers, ribbons, upholstery, etc., also for wall papers, frescoes, etc. Also by designers of forms, glass and pottery, furniture and household ornaments, carriages, etc. All these need comparatively little instrumental drawing, and that subordinately.

Now it is obvious on the face of it, that nothing could be more absurd than the attempt to teach all these things to all the pupils of all the schools everywhere, either in their rudiments, for that alone would be a waste of time as leading to nothing, nor to the point of producing artist workmen, for that would be obviously impracticable. So that the attempt, if made, would look very much like a vast fortune-hunting monopoly. Just what is wanted, and, as I think, all that is wanted is this. The industries chiefly requiring an application of the arts of industrial design, are strongly concentrated in a comparatively few great manufacturing centres, and hence special schools are wanted, in the centre of each art industry, in which, as those having a natural taste and fondness for design appear from time to time, they will find such form of industrial art education as will fit them for their respective specialties. Such a school is the Lowell School of Design in the Massachusetts Institute of Technology, which limits itself to designs for surface decoration, mostly of fabrics. This school is an entirely independent, and a peculiarly-successful one. Other like schools, each having one or more distinguishing specialties, are the Worcester Free Institute of Industrial Science, with

its rare combination of useful theory with a high order of workshop practice; the long-established and highly-useful Cooper Institute in New York, and other like institutions.

If this industrial art drawing is to be taught at all in public schools it would seem best that it should be only in manufacturing localities rather than in mainly agricultural and commercial districts, or else to such pupils only as should discover an aptness for it, and who, on graduation, should proceed to the special schools already described, which may, if thought desirable for the further and incidental benefit of their pupils, be made, as in Boston, departments of polytechnic schools, especially as these are generally in or near large manufacturing centres.

Nor does it seem necessary that every child in the land should be set to copying elementary card patterns, as a means of educating the taste of the whole people. The taste of a people is educated by familiarity with objects of beauty joined with familiar instruction from time to time in its principles. Give children drawing-books or cards for presents when, if they have any artistic capacity, it will reveal itself in due time, and when shown, can be separately cultivated to any extent as already indicated.

Moreover, not the humblest district school, but what can gradually collect, so far as necessary and useful print and other textile patterns, a few decorated or at least prettily-shaped wares and use them to illustrate occasional familiar art-talks.

On the other hand, the Instrumental division of industrial drawing is useful to machinists, carpenters, wheelwrights, pattern makers, founders, sheet-metal workers, instrument apparatus and model makers, shipbuilders, car-builders, organ-builders, and the whole army of mechanical trades, members of which are found everywhere; as well as in a generally more elevated form, and more of training in its theoretical portions, by students of Engineering and Architecture. Hence, as already more fully explained, it should be generally taught in the scientific departments of all high schools and academies for the twofold purpose, first, of better qualifying their graduates for entrance upon any of the many generally-diffused mechanical industries, such as those just mentioned, and, second, of preparing them evenly in all of the equally-proper preliminaries for further scientific study. The small amount and special kinds of free-hand drawing necessary for those to whom instrumental drawing is mainly important, can readily be given with the latter.

But to return to my main theme, the orderly distribution of graphical theory and practice through successive grades of schools, such as I have indicated. With an economical mutual adjustment of general and special studies in these grades, without wasteful overlapping, yet with ample thoroughness of review and drill in and by each grade for itself, and with the superior economy secured by the prevalence of free high schools, and the usual accessibility of colleges, at least when those giving general scientific courses shall be more numerous, as compared with professional schools which are best located in or near cities, we may look for a new and greatly-improved national experience in securing high scientific professional attainments joined with pure and upright citizenship. "Where *there is no* vision (of something inspiring to be accomplished) the people

perish." Let this, which I have sketched, be among the next visions to be realized in the sphere of higher education.

The subject was then opened for discussion.

Prof. THOMPSON:—Should like to have some reasons given for introducing drawing into our common schools that would be cogent and conclusive with children and their parents.

——— ———:—One good reason is that it develops a quick and correct sense or judgment of distances. This is a very obvious reason. Another reason is that it develops powers of correct observation and assists the memory. For example, suppose two boys one of whom has studied drawing, but who are otherwise equal, attend the Centennial Exhibition. He who has studied drawing will be most benefited because he will have observed more and more correctly and will remember better what he has seen.

Mr. STETSON:—In a new country most boys will at some time have occasion to build a house or a barn and will want first to draw their plans of it upon paper. This should be a good reason under such circumstances.

Mr. ABORN:—I make no pretensions to a theoretical knowledge of drawing but of its practical aspects I do claim to know something. I would put object-drawing first in the course, designing second, and projection third, because this is more nearly the order of their use and of their practical importance. The architect makes a rough sketch of his design and leaves the mechanical production of a perfect and symmetrical representation to the draughtsman.

Prof. HAMILTON:—The study of drawing is like the study of a new language and is therefore justified because of its discipline, its training. It gives new knowledge, an increase of knowledge, and it therefore gives a new power, an increase of power.

Dr. JOHN HANCOCK, of Ohio:—I think that much of the drawing that is taught in the West, (I cannot speak of the East as I do not know anything of it,) will do no harm. It begins simply with drawing pictures from flat surfaces and that is precisely where it ends.

At the close of this discussion, 12:30 P. M. the Department adjourned.

CHAS. Y. LACY, Sec'y.

DEPARTMENT OF SUPERINTENDENCE.

BALTIMORE, MD., JULY 11TH, 1876.

The Department met in the Baltimore College at one o'clock P. M., the president Hon. C. S. SMART of Ohio in the chair.

In the absence of the Secretary ALLEN ARMSTRONG of Iowa was appointed secretary *pro tem.*

After some statements by the chair of the purposes and work of the Department it was on motion of A. ARMSTRONG voted to hold a meeting of the department in Washington, D. C., early in the coming winter, the date to be fixed by the officers of the Department in consultation with the Commissioner of Education. An election of officers being then held the present President, Hon. C. S. SMART, of Ohio, and the present Secretary, H. S. TARBELL, of Michigan were re-elected for the ensuing year.

On motion of Hon. J. P. WICKERSHAM, of Pa., the officers were directed after consultation with the Commissioners of Education to announce in advance the specific topics for consideration at the next meeting.

Hon. R. D. SHANNON, of Missouri moved to inform the general Association that it is the judgment of this Department advisable to meet in Philadelphia on Monday next, in an International Educational Congress—Carried.

Hon. JOHN EATON, U. S. Commissioner of Education, Hon. J. P. WICKERSHAM, of Pa., and others then addressed the Department in reference to the proposed International Educational Congress.

An invitation from the ladies of Baltimore to an excursion down the Bay was accepted and thanks returned.

The Department adjourned to meet at the call of its President.

A. ARMSTRONG,
Secretary pro tem.

NOTE.—One of the noticeable features of the general sessions of the National Educational Association in Baltimore, July 10, 11, and 12, 1876, was the variety and excellence of the music furnished by the amateur musicians of the city. A printed musical programme had been previously prepared. The first piece on Monday forenoon, a duet, was given before the Welcome Addresses by the Governor and Mayor. After the inaugural addresses two additional pieces were rendered before the adjournment.

On Monday evening Mr. COCKEY performed a flute solo, "La Serene." A second piece, a bass solo, "The Storm," was given by Mr. HARRY SMITH, before the reading of Rev. Mr. MAYO's Address.

On Tuesday forenoon a Chorus and Semi-Chorus by twenty ladies of the Western Female High School was given under the direction of J. HARRY DEEMS. A second piece of music was rendered just before the Address of Dr. DA MOTTA.

On Tuesday evening the exercises were opened by a Soprano Solo, by Miss LOUISE BUSCHMANN. The Address of Dr. EDWARDS was followed by a Cornet Solo by Mr. HARRY PORTER.

The music on Wednesday forenoon under the direction of Prof. J. HARRY DEEMS, consisted of two solos by Miss ANNIE ROEMER, "*Una Voce Poco Fa*," and "I love my love," and a flute solo by Dr. CHAS. H. COCKEY.

CONSTITUTION

OF THE

NATIONAL EDUCATIONAL ASSOCIATION.

PREAMBLE.

To elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States, we, whose names are subjoined, agree to adopt the following

CONSTITUTION:

[*As amended July* 11, 1876.]

ARTICLE I.—NAME.

This Association shall be styled the National Educational Association.

ARTICLE II.—DEPARTMENTS.

§ 1. It shall consist of five Departments: the first, of School Superintendence; the second, of Normal Schools; the third, of Elementary Schools; and the fourth, of Higher Instruction, and the fifth of Industrial Education.

§ 2. Other Departments may be organized in the manner prescribed in this Constitution.

ARTICLE III.—MEMBERSHIP.

§ 1. Any person in any way connected with the work of education shall be eligible to membership. Such person may become a member of this Association by paying two dollars and signing this Constitution; and he may continue a member by the payment of an annual fee of two dollars. On his neglect to pay such fee, his membership shall cease.

§ 2. Each department may prescribe its own conditions of membership, provided that no person be admitted to such membership who is not a member of the general Association.

§ 3. Any person eligible to membership may become a life-member by paying at once, twenty dollars.

ARTICLE IV.—OFFICERS.

§ 1. The officers of this Association shall be a President, twelve Vice-Presidents, a Secretary, a Treasurer, one Counsellor for each State, District, or Territory represented in the Association, and the officers charged with the administration of their respective departments. Any friend of education may become a life-director by the donation of one hundred dollars to the Association at one time, either by himself or in his behalf.

§ 2. The President, Vice-Presidents, Secretary, Treasurer, Counsellors, Life-Directors, and presiding officers of their respective departments, shall constitute the Board of Directors, and, as such, shall have power to appoint such committees from their own number as they shall deem expedient.

§ 3. The elective officers of the Association shall be chosen by ballot, unless otherwise ordered, on the second day of each annual session, a majority of the votes cast being necessary for a choice. They shall continue in office until the close of the annual session subsequent to their election, and until their successors are chosen.

§ 4. Each department shall be administered by a President, Vice-President, Secretary, and such other officers as it shall deem necessary to conduct its affairs.

§ 5. The President shall preside at all meetings of the Association and of the Board of Directors, and shall perform the duties usually devolving upon a presiding officer. In his absence, the First Vice-President in order who is present shall preside; and in the absence of all the Vice-Presidents, a *pro tempore* Chairman shall be appointed on nomination, the Secretary putting the question.

§ 6. The Secretary shall keep a full and accurate report of the proceedings of the general meetings of the Association and all meetings of the Board of Directors; and shall conduct such correspondence as the Directors may assign; and shall have his records present at all meetings of the Association and of the Board of Directors. The Secretary of each department shall, in addition to performing the duties usually pertaining to his office, keep a list of the members of his department.

§ 7. The Treasurer shall receive and hold in safe keeping all moneys paid to the Association, shall expend the same only upon the order of the Committee of Finance; shall keep an exact account of his receipts and expenditures, with vouchers for the latter, which accounts he shall render to the Board of Directors prior to each regular meeting of the Association, and shall also present an abstract thereof to the Association. He shall give bonds for the faithful discharge of his duties as may be required by the Board of Directors.

§ 8. The Board of Directors shall have power to fill all vacancies in their own body; shall have in charge the general interests of the Association; shall make all necessary arrangements for its meetings; and shall do all in their power to make it a useful and honorable institution. Upon the written application of twenty members of the Association for permission to establish a new department, they may grant such permission. Such new department shall in all respects be entitled to the same rights and privileges as the others. The formation of such department shall in

effect be a sufficient amendment to this Constitution for the insertion of its name in Article II, and the Secretary shall make the necessary alterations.

§ 9. The Board of Directors shall appoint three trustees into whose hands shall be placed for safe keeping and investment, all funds which the Association may receive from the creation of life-directorships, or from donations, unless the donors shall specify other purposes for which they may be used. The income of such funds so invested shall be used exclusively in defraying the expense of publishing the annual volume of the Association, unless the donors shall specify otherwise. The Board of Directors shall require such trustees to give to the Association their joint bond in a sum equal to twice the amount of such trust fund as may be in their hands.

ARTICLE V.—MEETINGS.

§ 1. The annual meeting of the Association shall be held at such time and place as shall be determined by the Board of Directors.

§ 2. Special meetings may be called by the President at the request of five Directors.

§ 3. Any department of the Association may hold a special meeting at such time and place as by its own regulations it shall appoint.

§ 4. The Board of Directors shall hold their regular meetings at the place, and not less than two hours before the assembling of the Association.

§ 5. Special meetings may be held at such other times and places as the Board or the President shall determine.

§ 6. Each new Board shall organize on the day of its election. At its first meeting a Committee on Publication shall be appointed, which shall consist of the Secretary of the Association for the previous year, and one member from each department.

ARTICLE VI.—BY-LAWS.

By-Laws not inconsistent with this Constitution may be adopted by a two-thirds vote of the Association.

ARTICLE VII.—AMENDMENTS.

This Constitution may be altered or amended at a regular meeting by the unanimous vote of the members present or by a two-thirds vote of the members present, provided that the alteration or amendment has been substantially proposed in writing at a previous regular meeting.

BY-LAWS.

1. At each regular meeting of the Association there shall be appointed a Committee on Nominations; one on Honorary Members; and one on Resolutions.

2. The President, First Vice-President, and Secretary, shall constitute a Committee on Finance.

3. Each paying member of the Association shall be entitled to a copy of its proceedings.

MEMBERSHIP

OF THE

NATIONAL EDUCATIONAL ASSOCIATION

LIST OF LIFE-DIRECTORS.

BALTIMORE, 1876.

Phelps, W. F., Whitewater. Wis.,
White, S. H., Peoria, Ill.

LIST OF LIFE-MEMBERS.

[In this list which is as full as can be made from the published proceedings, the present addresses are given when known to the Secretary. The addresses marked with an asterisk were the addresses given at the time the persons became life-members, and the Secretary is unable to say whether they remain correct.]

OGDENSBURG, 1864.

Barnard, Henry, Hartford, Conn.,
Bradley, P., Lyons,* N. Y.,
Cruikshank, Jas., Brooklyn, N. Y.,
Danforth, Edward, Elmira, N. Y.,
Eberhart, J. F., Chicago,* Ill.,
Hagar, D. B., Salem, Mass.,
Pennell, C. S., St. Louis, Mo.,
Richards, Z., Washington, D. C.,
Wells, D. F.,† Iowa, City, Io.,
White, S. H., Peoria, Ill.

HARRISBURGH, 1865.

Greene, S. S., Providence, R. I.,
Hartshorn, O. N., Mt. Union, O.,
Ingram, S. D., Harrisburgh,* Pa.,
Sheldon, W. E., Boston,* Mass.,
Wickersham, J. P., Harrisburgh, Pa.

INDIANAPOLIS, 1866.

Curran, U. T., Sandusky, Ohio,
McKae, H. S., Vevay,* Ind.,
Mayhew, Ira, Albion, Mich.,
Norris, John A., Columbus, Ohio.

CLEVELAND, 1870.

Arey, Oliver, Whitewater,* Wis.,
Allen, Ira W., Lake Forest,* Ill.,
Cole, W. H., Columbia, Mo.,
Crosby, W. E., Davenport, Io.,
Hoyt, J. W., Madison, Wis.,
Hoose, J. H., Cortland, N. Y.,
Hobbs, B. C., Annapolis, Ind.,
Heywood, C. W., Cleveland, Ohio,
Holden, L. E., " "
Jones, D. W., Boston (Highlands), Mass.,
Lathrop, Delia A., Cincinnati, Ohio,
Manly, R. M., Richmond,* Va.,
McGuffey,† W. H., Univ. of Va.,
Phelps, W. F., Whitewater, Wis.,
Read, Daniel, Columbia, Mo.,
Rickoff, A. J. Cleveland, Ohio,
Stone, Mrs. M. A., New Milford, Ct.,
Tourjee, Eben, Boston,* Mass.
Wilcox, M. C., Boston,* "
White, E. E., Lafayette, Ind.

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† Deceased.

BOSTON, 1872.

Stone, E. M., Providence, * R. I.

ELMIRA, 1873.

Haines, Miss Henrietta B., 10 Gramercy Park,* N. Y.

BALTIMORE, 1876.

Armstrong, Allen, Sioux City, Io.,
Beals, S. D., Omaha, Neb.,
Bell, W. A., Indianapolis, Ind.,
Brooks, Edward, Millersville, Pa.,
Cruikshank, James, Brooklyn, N. Y.,
Dorna, G. Videla, New York, N. Y.,
Forbes, Alex., Cleveland, Ohio,
Hancock, John, Dayton, Ohio,
Harris, W. T., St. Louis, Mo.,
Henkle, W. D., Salem, Ohio,
Laws, S. S., Columbia, Mo.,
Malone, J. R., Dallas, Tex.,
Marshall, T. M., Glenville, W. Va.,
Nelson, C. K., Annapolis, Md.,
Newell, M. A., Baltimore, Md.,
Richmond, Sarah E., Baltimore, Md.,
Rollins, Jas. S., Columbia, Mo.,
Rounds, C. C., Farmington, Me.,
Schmitz, J. Adolph, Wooster, Ohio,
Stevens, M. C., Salem, Ohio,
Stone, Mrs. M. A., New Milford, Ct.,
Thompson, L. S., Sandusky, Ohio,
White, E. E., Lafayette, Ind.,
Wickersham, J. P., Harrisburgh, Pa.,

Those names printed in Italics are of persons who had previously become life-members when the fee was $10, but who chose to pay $10 more and become life-members under the new fee of $20.

MEMBERS AT BALTIMORE,

ARRANGED BY STATES.

REMARK.—The Secretary's personal knowledge of the initials, names, and residence of a majority of the members in attendance at Baltimore, has enabled him to make several corrections in the following list of names forwarded by the Treasurer. In some cases the wrong States were given. There are doubtless several mistakes yet uncorrected. B. Mallon's address was reported Atlanta, Ga., and Baltimore, Md. He does not know of two persons of this name. It may be a case of change of address without erasure of the first. As printed matter is not forwarded or returned without prepayment of postage, it is important that volumes of Proceedings should not be wrongly directed. All will be done that is possible to prevent the loss of volumes by postal cards sent in advance to persons whose address is doubtful. At the next meeting wide blanks will be furnished with printed headings for name, profession, School or Institution of Learning (if any), Post-Office, No. and Street, County, and State, to be filled by members. This will insure a more accurate list of members than has ever heretofore been secured.

ARIZONA TERRITORY.

M. H. Sherman, Prescott.

ARKANSAS.

George W. Hill, Little Rock,
Miss Della Hill, Camden,
James Mitchell, Fayetteville.

BRAZIL.

Dr. Philippe da Motta, Rio Janeiro.

CALIFORNIA.

Miss L. A. Buckmaster, San Mateo, W. T. Luckey, Los Angeles.
Ezra S. Carr, Sacramento,

COLORADO.

I. C. Drunett, Central City.

CONNECTICUT.

Mrs. M. A. Stone, New Milford.

DELAWARE.

Addie Rowland, Wilmington, Mary E. Rowland, Wilmington.

DISTRICT OF COLUMBIA.

James Corridon, Washington,
I. Edwards Clarke, "
Hon. John Eaton, "
A. Hart, Washington,
Z. Richards, "
J. Ormond Wilson, Washington.

ENGLAND.

E. Jones, Liverpool.

FRANCE.

F. Buisson, 166 Boulevard du Montparnasse, Paris.

GEORGIA.

B. Mallon, Atlanta,
E. M. Pendleton, Athens.

ILLINOIS.

S. C. Allen, Champaign,
Miss. M. Buck, Carbondale,
A. J. Cheney, Chicago,
Mrs. A. J. Cheney, Oak Park,
O. S. Cook, Chicago,
M. Juliet Danforth, Chicago,
Mrs. Eliza R. Danforth, Chicago,
T. L. Evans, Paxton,
S. M. Etter, Springfield,
Edwin C. Hewitt, Normal,
M. Miles, Champaign,
Miss R. A. Miller, Warsaw,
Mrs. H. M. Nash, Carbondale,
F. T. Oldt, Lanark,
J. L. Pickard, Chicago,
E. F. Reid, Normal,
Virginia Sayre, Chicago,
John H. Wilson, Peoria.

INDIANA.

Wm. A. Bell, Indianapolis,
Sheridan Cox, Kokomo,
Mrs. Sheridan Cox, Kokomo,
Samuel Moss, Bloomington,
J. B. Roberts, Indianapolis,
Jas. H. Smart, Indianapolis,
O. H. Smith, Rockport,
Jos. H. Stewart, Indianapolis,
E. E. White, Lafayette,
Mrs. E. E. White, Lafayette.

IOWA.

Alonzo Abernethy, Des Moines,
A. Armstrong, Sioux City,
W. E. Crosby, Davenport,
Prof. S. N. Fellows, Iowa City,
C. M. Grumbling, Indianola,
J. K. Pickett, Sigourney,
C. P. Rogers, Marshalltown,
H. H. Seerley, Oskaloosa,
Virginia L. Scott, Kossuth,
C. E. White, Decorah.

KENTUCKY.

J. B. Bowman, Lexington,
J. W. Dodd, Frankfort,
H. A. M. Henderson, Frankfort,
Miss L. D. Hampton, Louisville,
M. Kirby, Henderson.

MAINE.

Warren Johnson, Augusta,
C. C. Rounds, Farmington,
J. W. Stetson, East Sumner.

MARYLAND.

Wm. Allan, Owing's Mills,
Rev. Dr. Bryan, Cambridge,
Chas. W. Baker, St. Michael's,
Alex. Chaplain, Easton,
Rev. W. T. Crapster, Lisbon,
Rev. S. Cornelius, Prince Frederick,
Martin O. Camper, St. Michael's,
Wm. Elliott, Jr., Baltimore,
James M. Garnett, Annapolis,
S. L. Gilman, Annapolis,
Wm. H. Harlan, Bel Air,
Geo. E. Haddoway, St. Michael's,
Ellen M. Lee, Baltimore,
Verlinda A. Mudd, Mattawoman,
Anna M. Murphy, Baltimore,
M. A. Newell, Baltimore,
C. K. Nelson, Annapolis,
C. F. Raddatz, Baltimore,
Miss S. E. Richmond, Baltimore,
Wm. Reddie, Trappe,
Mary W. Storke, Baltimore,
Henry E. Shepherd, Baltimore,
J. D. Warfield, Ag. College.

MASSACHUSETTS.

A. G. Boyden, Bridgewater,
J. W. Dickinson, Westfield,
G. I. Hubbard, Cambridge,
A. P. Marble, Worcester,
A. D. Mayo, Springfield,
Lucy Noyes, Boston,
Chas. B. Stetson, Boston,
Geo. A. Walton, Westfield.

MICHIGAN.

Mrs. Laura Adams, Detroit,
C. F. R. Bellows, Ypsilanti,
E. B. Curtis, Calumet,
Mrs. A. J. Field, South Haven,
J. C. Jones, Pontiac,
Edward Olney, Ann Arbor,
Sarah H. Olney, Ann Arbor,
Oliver G. Owen, East Saginaw,
J. M. B. Sill, Detroit,
H. S. Tarbell, East Saginaw,
Mrs. E. B. Wood, Phœnix.

MINNESOTA.

Clarence M. Boutelle, Winona,
Wm. W. Folwell, Minneapolis,
Chas. Y. Lacy, Minneapolis.
Chas. A. Morey, Winona.

MISSISSIPPI.

Jas. G. Clark, Liberty.

MISSOURI.

D. G. Aber, Arrow Rock,
J. Baldwin, Kirksville,
J. J. Campbell, Warrensburg,
C. H. Dutcher, Kirksville,
Anna C. Gates, St. Louis,
W. T. Harris, St. Louis,
A. F. Hamilton, St. Louis,
Florence K. Holden, St. Louis,
Samuel S. Laws, Columbia,
J. S. McGhee, Pierce City,
Jas. S. Rollins, Columbia,
Mrs. R. D. Shannon Jefferson City.
Louis Soldan, St. Louis.

NEBRASKA.

S. D. Beals, Omaha,
C. B. Palmer, Beatrice,
S. R. Thompson, Peru.

NORTH CAROLINA.

J. R. Blake, Davidson College.

NEW HAMPSHIRE.

Mary M. Gile, Franklin Falls.

NEW JERSEY.

Kate S. French, New Brunswick,
Nettie F. Randolph, New Brunswick,
Randall Spaulding, Mt. St. Clair,
Minnie Swayze, Trenton,
Mrs. G. Van Akin, Jersey City.

NEW YORK.

John J. Anderson, Brooklyn,
Henry B. Buckham, Buffalo,
Geo. H. Bemus, Avon,
Mrs. Geo. H. Bemus, Avon,
F. N. Bardwell, New York,
N. A Calkins, New York,
N. T. Clark, Canandaigua,
Jas. Cruikshank, Brooklyn,
Edward Danforth, Elmira,
Nancy Elliott, New York,
Mrs. S. E. Fletcher, Geneseo.
Neil Gilmour, Albany,
J. H. Hoose, Cortland,
Mrs. J. H. Hoose, Cortland,
Miss F. J. Hubbard, Norwich,
John Kraus, New York,
Mrs. John Kraus, New York,
E. A. Lawrence, New York,
Wm. J. Milne, Geneseo.

OHIO.

Frank Aborn, Cleveland,
Mrs. M. Cuscaden, Hiram,
F. W. Clarke, Cincinnati,
Alex. Forbes, Cleveland,
J. H. Grove, Wilmington,
A. E. Gladding, Hudson,
W. D. Henkle, Salem,
C. L. Hotze, Cleveland,
B. A. Hinsdale, Hiram,
John Hancock, Dayton,
J. B. Irvin, Dayton,
A. B. Johnson, Avondale,
L. H. Powell, Mt. Gilead,
John B. Peaslee, Cincinnati,
C. B. Ruggles, Cincinnati,
Andrew J. Rickoff, Cleveland,
Rebecca D. Rickoff, Cleveland,
Miss M. Ritson, Columbus,
J. A. Schmitz, Wooster,
Chas. S. Smart, Columbus,
M. C. Stevens, Salem,
L. S. Thompson, Sandusky,
H. A. Thompson, Westerville,
Eli T. Tappan, Gambier,
Franklin Wood, Marysville,
W. W. Wallace, Wooster,
Ida Zerbe, Massillon.

PENNSYLVANIA.

W. H. G. Adney, Washington,
Andrew Burtt, Pittsburgh,
Edward Brooks, Millersville,
Geo. P. Beard, Shippensburg,
A. P. Flint, Philadelphia,
Frank Gohen, Philadelphia,
Milton B. Goff, Pittsburgh,
M. N. Horton, Franklin,
J. Hamilton, Center County,
Geo. J. Luckey, Pittsburgh,
Rose McCleary, Pittsburgh,
Rebecca Moore, Philadelphia,
Jennie Ralston, Pittsburgh,
W. H. Shelly, York,
M. B. Sloan, Pittsburgh,
Martha M. Tompkinson, Harrisburgh,
W. E. Wilson, Zelienople.

SWEDEN.

C. J. Mejerberg, Stockholm.

TENNESSEE.

Edward S. Joynes, Nashville.

TEXAS.

Rev. Jas. R. Malone, Dallas.

UTAH.

O. H. Riggs, Salt-Lake City.

VIRGINIA.

F. P. Dunnington, University of Va.

WEST VIRGINIA.

B. W. Byrne, Wheeling,
J. G. Blair, Fairmont,
T. M. Marshall, Glenville.

WISCONSIN.

John P. Bird, La Crosse,
Geo. Beck, Platteville,
Ettie Carle, East Troy,
D. McGregor, Platteville,
W. F. Phelps, Whitewater,
S. S. Rockwood, Whitewater,
C. W. Roby, La Crosse,
W. C. Sawyer, Appleton,
Miss S. A. Stewart, Milwaukee.

MEMBERS AT BALTIMORE,

ARRANGED ALPHABETICALLY.

A.

Aber, D. G., Mo.,
Abernethy, Alonzo, Iowa,
Aborn, Frank, Ohio,
Adams, Mrs. Laura, Mich.,
Adney, W. H. G., Pa.,
Allan, Wm., Md.,
Allen, S. C., Ill.,
Anderson, John J., N. Y.,
Armstrong, A., Iowa.

B.

Baker, Chas. W., Md.,
Baldwin, J., Mo.,
Bardwell, F. N., New York,
Beals, S. D., Nebraska,
Beard, Geo. P., Pa.,
Beck, Geo., Wis.,
Bell, Wm. A., Ind..
Bellows, C. F. R., Mich.,
Bemus, Geo. H., N. Y.,
Bemus, Mrs. Geo. H., N. Y.,
Bird, John P., Wis.,
Blair, J. G., W. Va.,
Blake, J. R., N. C.,
Boutelle, Clarence M., Minn.,
Bowman, J. B., Ky.,
Boyden, A. G., Mass.,
Brooks, Edward, Pa.,
Bryan, Rev. Dr., Md.,
Buck, Miss M., Ill.,
Buckham, Henry B., N. Y.,
Buckmaster, Miss S. A., Cal.,
Buisson, F., France,
Burtt, Andrew, Pa.,
Byrne, B. W., W. Va.

Calkins, N. A., N. Y.,
Campbell, J. J., Mo.,
Camper, Martin, O., Md.,
Carle, Ettie, Wis.,
Carr, Ezra S., Cal.,
Chaplain, Alexander, Md.,
Cheney, A. J., Ill.,
Cheney, Mrs. A. J., Ill.,
Clark, Jas. G., Miss.,
Clark, N. T., N. Y.,
Clarke, F. W., O.,

Danforth, Edward, N. Y.,
Danforth, Mrs. E. R., Ill.,
Danforth, M. Juliet, Ill.,
Dickinson, J. W., Mass.,

Eaton, Hon. John, D. C.,
Elliott, Miss Nancy, N. Y.,
Elliott, Wm., Jr., Md.,

Fellows, S. N., Iowa,
Field, Mrs. A. J., Mich.,
Fletcher, Mrs. S. E., N. Y.,
Flint, A. P., Pa.,

Garnett, Jas. M.. Md.,
Gates, Anna C., Mo.,
Gile, Mary M., N. H.,
Gilman, S. L., Md.,
Gilmour, Neil, N. Y.,

Haddoway, Geo., E., Md.,
Hagar, D. B., Mass.,
Hamilton, A. F., Mo.,
Hamilton, J., Pa.,
Hampton, Miss L. D., Ky.,
Hancock, John, Ohio,
Harlan, Wm. H., Md.,
Harris, W. T., Mo.,
Hart, A., D. C.,
Henderson, H. A. M., Ky.,
Henkle, W. D., O.,

C.

Clarke, I. Edward, D. C.,
Cook, O. S., Ill.,
Cornelius, Rev. Saml., Md.,
Corridon, James, D. C.,
Cuscaden, Mrs. M., O.,
Cox, Sheridan, Ind.,
Cox, Mrs. Sheridan, Ind.,
Crapster, Rev. Wm. T., Md.,
Crosby, W. E., Iowa,
Cruikshank, Jas., N. Y.,
Curtis, E. B., Mich.

D.

Dodd, J. W., Ky.,
Drunett, I. C., Col.,
Dunnington, F. P., Va.,
Dutcher, C. H., Mo.

E.

Etter, S. M., Ill.,
Evans, T. L., Ill.

F.

Folwell, Wm. W., Minn.,
Forbes, Alex., Ohio.,
French, Kate S., N. J.

G.

Gladding, A. E., Ohio.,
Goff, Milton B., Pa.,
Gohen, Frank, Pa.,
Grove, J. H., O.,
Grumbling, C. W., Iowa.

H.

Hewett, Edwin C., Ill.,
Hill, Miss Della, Ark.,
Hill, Geo. W., Ark.,
Hinsdale, B. A., O.,
Holden, Florence K., Mo.,
Hoose, J. H.. N. Y.,
Hoose, Mrs. J. H., N. Y.,
Horton, M. N., Pa.,
Hotze, C. L., O.,
Hubbard, Miss F. J., N. Y.,
Hubbard, G. I., Mass.

Irvin, J. B., Ohio.

Johnson, A. B., Ohio,
Johnson, Warren, Me.,
Jones, E., England,

Kirby, M., Ky.,
Kraus, John, N. Y.,

Lacy, Chas. Y., Minn.,
Lawrence, E. A., N. Y.,
Laws, Sam'l S., Mo.,

Mallon, B., Ga.,
Malone, Rev. Jas. R., Tex.,
Marble, A. P., Mass.,
Marshall, T. M., W. Va.,
Mayo, A. D., Mass.,
McCleary, Rose, Pa.,
McGhee, J. S., Mo.,
McGregor, D., Wis.,
Mejerberg, C. J., Sweden,
Miles, M., Ill.,

Nash, Mrs. Helen M., Ill.,
Nelson, C. K., Md.,

Oldt, F. T., Ill.,
Olney, Edward, Mich.,

Palmer, C. B., Neb.,
Peaslee, John B., Ohio,
Pendleton, E. M., Ga.,
Phelps, W. F., Wis.,

Raddatz, C. F., Md.,
Ralston, Miss Jennie, Pa.,
Randolph, Nettie F., N. J.,
Reddie, Wm., Md.,
Reid, E. F., Ill.,
Richards, Z., D. C.,
Richmond, Miss S. E., Md.,
Rickoff, A. J., Ohio,
Rickoff, Rebecca D., Ohio,
Riggs, O. A., Utah,

I.

J.

Jones, J. C., Mich.,
Joynes, E. S., Tenn.

K.

Kraus, Mrs. John, N. Y.

L.

Lee, Ellen M., Md.,
Luckey, Geo. J., Pa.,
Luckey, W. T., Cal.

M.

Miller, Miss R. A., Ill.
Milne, Wm. J., N. Y.,
Mitchell, Jas., Ark.,
Moore, Rebecca, Pa.,
Morey, Chas. A., Minn.,
Moss, Sam'l, Ind.,
Motta, Dr. Philippe da, Brazil,
Mudd, Verlinda A., Md.,
Murphy, Anna M., Md.

N.

Newell, M. A., Md.,
Noyes, Lucy, Mass.

O.

Olney, Sarah H., Mich.,
Owen, Oliver G., Mich.

P.

Pickard, J. L., Ill.,
Pickett, J. K., Iowa,
Powell, L. H., Ohio,

R.

Ritson, Miss M., Ohio,
Roby, C. W., Wis.,
Roberts, J. B., Ind.,
Rockwood, S. S., Wis.,
Rogers, C. P., Iowa,
Rollins, Jas. S., Mo.,
Rounds, C. C., Me.,
Rowland, Addie, Del.,
Rowland, Mary E., Del.,
Ruggles, C. B., Ohio.

Sawyer, W. C., Wis.,
Sayre, Virginia, Ill.,
Schmitz, J. Adolph, Ohio,
Scott, Virginia L., Iowa,
Seerley, H. H., Iowa,
Shannon, R. D., Mo.,
Shannon, Mrs. R. D., Mo.,
Shelly, W. H., Pa..
Shepherd, Henry E., Md.,
Sherman, M. H., Arizona,
Sill, J. M. B., Mich.,
Sloan, M. B., Pa.,

S.

Smith, O. H., Ind.,
Smart, Chas. S., Ohio,
Smart, Jas. H., Ind.,
Soldan, Louis, Mo.,
Spaulding, Randall, N. J.,
Stetson, Chas. B., Mass.,
Stetson, J. W. Me.,
Stevens, M. C., Ohio,
Stewart, Miss S. A., Wis.,
Storke, Mary W., Md.,
Stone, Mrs. M. A., Conn.,
Swayze, Miss Minnie, N. J.

Tappan, Eli T., Ohio,
Tarbell, H. S., Mich.,
Thompson, H. A., Ohio,

T.

Thompson, L. S.. Ohio,
Thompson, S. R., Neb.,
Tomkinson, Martha M., Pa.

Van Akin, Mrs. G., N. J.

V.

Wallace, W. W., Ohio,
Walton, Geo. A., Mass.,
Warfield, J. D., Md.,
White, C. E., Iowa,
White, E. E., Ind.,
White, Mrs. E. E., Ind.,

W.

Wilson, J. Ormond, D. C.,
Wilson, John H., Ill.,
Wilson, W. E., Pa.,
Wood, Mrs. E. B., Mich.,
Wood, Franklin, Ohio.

Z.

Zerbe, Ida, Ohio.

NOTE.—The following names were not reported by the Treasurer. The Secretary has received these names and the necessary two-dollar fees since the meeting in Baltimore.

Wm. M. Bristoll, Yankton, Dakota.
Alex. Hogg, Bryan, Texas.
John F. Oxtoby, North East, Pa.
W. G. Williams, Delaware, Ohio.

BOARD OF DIRECTORS.

Proceedings for 1876.

OLD BOARD.

The Board met July 10, at 8 A. M. at the Carrollton House. After general statements had been made by the President, W. F. PHELPS, and the Secretary, W. D. HENKLE, the Chair appointed D. B. HAGAR, JAS. CRUIKSHANK, and H. S. TARBELL, a committee to audit accounts. On motion of Dr. CRUIKSHANK, the Secretary was instructed to publish annually the list of Life-members.

S. R. THOMPSON moved that the Board of Directors recommend to the Association to change the Constitution so as to make Life-memberships twenty dollars. E. T. TAPPAN moved that fifty dollars be substituted for twenty dollars. After some discussion Mr. THOMPSON moved the subject be referred to President W. F. PHELPS, E. T. TAPPAN, and JAS. CRUIKSHANK. This action resulted in a subsequent change of the Constitution and the establishment of the new office of Life-Directorship.

Dr. DA MOTTA, of Brazil was introduced to the Board.

On motion of D. B. HAGAR the Secretary was instructed to secure full reports of the Proceedings. [He secured from Gen. EATON a reporter who unfortunately was taken sick the first day. *Sec.*]

On motion of W. T. HARRIS, the Treasurer was ordered to get full addresses of all members, with streets and numbers of those in cities with a postal delivery. Adjourned.

Board met July 11, at Carrollton House at 8 A. M. Dr. HAGAR was chosen chairman *pro tem.*

The Treasurer, A. P. MARRLE, made his report, which on motion of E. T. TAPPAN was adopted, and the Treasurer ordered to pay to the Publication Committee the balance left in his hands after paying other bills. The auditing committee was authorized to report on Treasurer's Account to the New Board. Adjourned.

W. D. HENKLE, *Secretary.*

NEW BOARD.

Board met in the East Café of the Academy of Music, President M. A. NEWELL in the Chair.

On motion of E. T. TAPPAN, the Secretary was authorized to fill Publication Committee. He appointed to serve with him the following named gentlemen:—E. T. TAPPAN, Gambier, Ohio; S. R. THOMPSON, Peru, Nebraska; D. B. HAGAR, Salem, Mass.; JAMES CRUIKSHANK, 206 South Oxford Street, Brooklyn, N. Y., and the Hon. H. A. M. HENDERSON, Frankfort, Ky.

The Committee was granted full latitude as to mode and manner of publication.

On motion of Dr. CRUIKSHANK, the Secretary was directed to prepare subscription lists for use on the excursion boat to Fairhaven, to raise funds for the publication of the proceedings at Baltimore. On motion of Prof. TAPPAN the President was directed to appoint a local committee of one or more on permanent endowment.

On motion of W. F. PHELPS, applications for places of meeting be left to the Executive Committee with power to act.

On motion of S. H. WHITE, the President was instructed to secure an incorporation and name trustees. Adjourned.

W. D. HENKLE, *Secretary.*

TREASURER'S REPORT.

		Dr.
1875		
August 1.	To balance from last Treasurer	$134 26
Sep. 20.	" Cash receipts at Minneapolis (collected by W. D. Henkle.)	255 00
1876		
July 8.	To Membership Fees to date and volumes sold (including $15.00 from S. H. White)	70 51
" 8.	" Cash from W. D. Henkle, fees and volumes sold	426 40
" 10.	" Volumes sold	24 00
" 12.	" Membership Fees, Baltimore	366 00
" "	" Membership Fees and 2 Volumes	62 00
		$1338 17

CONTRA

		Cr.
1875		
Sept. 20.	By C. Hamilton's Note	$400 00
Nov. 29.	" Express, Postage, and Advertising	8 85
1876		
July 8.	By Postage, Express, and Printing bills at Minneapolis	51 55
" "	" Amount paid W. D. Henkle on account of publication for 1875	377 95
" 10.	" Express, Postage, and Telegrams at Baltimore	12 40
" 12.	" Cash paid W. D. Henkle on account of Publication Committee	429 17
" 14.	" Balance to New Treasurer	58 25
		$1338 17

A. P. MARBLE, Treasurer.

REPORT OF AUDITING COMMITTEE.

[COPY.]

The undersigned have examined the foregoing account of the Treasurer of the National Educational Association with the vouchers therefor, and find the same to be correct.

JAMES CRUIKSHANK, D. B. HAGAR. } Auditing Com.

VOLUMES UNSOLD.

The Treasurer, J. ORMOND WILSON, Washington, D. C., reported under date of Nov. 29, 1876, as in his custody

Proceedings of 1872	53	volumes
" " 1873	228	"
" " 1874	176	"
" " 1875	109	"

A few days after the reception of this statement, the Secretary received from the Board of Education of St. Louis, Mo., an order for 60 copies of the volume for 1875. These he ordered to be sent, thus leaving only 49 volumes for 1875.

REPORT OF PUBLICATION COMMITTEE.

An edition of 1017 copies of the Proceedings of 1875 was published at

Cost of Printing, Binding, Boxing, Insurance, Freight, etc. $761.01

Received from A. P. Marble, Treasurer $761.01

The volumes were sent to Washington, D. C., and sent by mail to members from that point. About 20 copies were ordered to be sent to editors of School Journals for notice. The remainder not sold are now in the custody of J. Ormond Wilson, of Washington, the Treasurer elected at Baltimore.

W. D. HENKLE, *Chairman of Publication Com.*

SECRETARY'S ACCOUNT.

National Educational Association.	*Dr.*
To expressage on books from Minneapolis	$ 1.20
" " " box to Baltimore	2.50
" " " " from Washington	.65
" postage on programmes	11.63
" " " letters, cards, and tickets	5.66
" printing, folding, and stitching 4000 8-page programmes	48.10
" design for title-page	9.00
" photo-lithograph cut and expressage	9.50
" 600 membership tickets	11.00
	$99.24

Contra.

By cash from Treasurer A. P. Marble	$46.11
Balance due Secretary (W. D. Henkle)	53.13

REPORT OF AUDITING COMMITTEE.

The Committee appointed to audit the bills of the Secretary for printing Proceedings and other expenses, respectfully report that they have duly examined and approved the following:—[here are given the above bills with a credit of $377.95, all the Treasurer had then paid making the amount due the Secretary $482.30; he afterwards paid $429.17, making the whole amount paid by him $807.12, leaving $53.13 due Secretary as above].

Signed D. B. HAGAR,
JAMES CRUIKSHANK,
H. S. TARBELL.

The above accounts do not include Pres. W. F. Phelps's printing bill about $30 rendered since the Baltimore meeting. It will appear along with other bills and receipts in the next year's report of the Treasurer.

OFFICERS FOR 1876-7.

GENERAL ASSOCIATION.

M. A. NEWELL, Baltimore, Md., - - President.
JOHN HANCOCK, Dayton, Ohio, - First Vice-President.
W. D. HENKLE, Salem, Ohio, - - - Secretary.
J. ORMOND WILSON, Washington, D. C., - - Treasurer.
[For other Vice-Presidents, and Counsellors see p. 57.]

DEPARTMENT OF HIGHER INSTRUCTION.

D. C. GILMAN, Baltimore, Md., - - President.
E. T. TAPPAN, Gambier, Ohio, - - Vice-President.
E. S. JOYNES, Nashville, Tenn., - - Secretary.

DEPARTMENT OF NORMAL SCHOOLS.

L. H. SOLDAN, St. Louis, Mo., - - President.
[The Secretary *pro tem*, C. C. ROUNDS, says he can neither find nor recall the names of the Vice-President and Secretary].

DEPARTMENT OF ELEMENTARY INSTRUCTION.

JAMES CRUIKSHANK, Brooklyn, N. Y., - President.
H. A. M. HENDERSON, Frankfort, Ky., - Vice-President.
FRANK ABORN, Cleveland, Ohio, - - Secretary.

INDUSTRIAL DEPARTMENT.

MANLY MILES, Champaign, Ill., - - President.
E. M. PENDLETON, Athens, Ga., - - Vice-President.
CHAS. Y. LACY, Minneapolis, Minn., - - Secretary.

DEPARTMENT OF SUPERINTENDENCE.

CHAS. S. SMART, Columbus, Ohio, - - President.
A. PICKETT, Memphis, Tenn., - - Vice-President.
H. S. TARBELL, East Saginaw, Mich., - - Secretary.

CORRECTIONS.—On page 48, line 11, change "therefore" to "therefor;" in line 15 "Art. 2, of Section IV" should be "Section 2, of Art. IV." The mistake was made either by the Committee or Assistant Secretary. In line 23, change "drefaying" to "defraying." On p. 189 insert "be regarded" after "should*." On p. 77, line 6th from the bottom "freely" should be "fully." On p. 84, line 10 "we gained" should be "and regained." On p. 88, line 14th from the bottom "224" should be "244." On p. 89, line 7, "016" should be "116."